

AL-TR-1991-0033

AD-A240 848



WASTE ANALYSIS PLAN AND WASTE  
CHARACTERIZATION SURVEY  
BARKSDALE AFB LA

DTIC  
ELECTE  
SEP 19 1991  
S B D

Chung H. Yen, Captain, USAF, BSC

OCCUPATIONAL AND ENVIRONMENTAL  
HEALTH DIRECTORATE  
Brooks Air Force Base, TX 78235-5000

March 1991

Final Technical Report for Period 29 October 1990 - 8 November 1990

Approved for public release; distribution is unlimited.

91-10747



91 9 16 067

AIR FORCE SYSTEMS COMMAND  
BROOKS AIR FORCE BASE, TEXAS 78235-5000

ARMSTRONG

LABORATORY

## NOTICES

When Government drawings, specifications, or other data are used for any purpose other than a definitely related Government procurement operation, the Government incurs no responsibility or any obligation whatsoever. The fact that the Government may have formulated, or in any way supplied the drawing, specifications, or other data, is not to be regarded by implication, or otherwise, as in any manner licensing the holder or any other person or corporation; or conveying any rights or permission to manufacture, use, or sell any patented invention that may in any way be related thereto.

The mention of trade names or commercial products in this publication is for illustration purposes and does not constitute endorsement or recommendation for use by the United States Air Force.


The Public Affairs Office has reviewed this report, and it is releasable to the National Technical Information Service, where it will be available to the general public, including foreign nations.


This report has been reviewed and is approved for publication.

Air Force installations may direct requests for copies of this report to: Armstrong Laboratory, Occupational and Environmental Health Directorate Library, Brooks AFB TX 78235-5000.

Other Government agencies and their contractors registered with the DTIC should direct requests for copies of this report to: Defense Technical Information Center (DTIC), Cameron Station, Alexandria VA 22304-6145.

Non-Government agencies may purchase copies of this report from: National Technical Information Service (NTIS), 5285 Port Royal Road, Springfield VA 22161

  
CHUNG H. YEN, Capt, USAF, BSC  
Consultant, Hazardous Waste

  
EDWIN C. BANNER III, Col, USAF, BSC  
Chief, Bioenvironmental Engineering Division

**REPORT DOCUMENTATION PAGE**Form Approved  
OMB No. 0704-0188

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.

<b>1. AGENCY USE ONLY (Leave blank)</b>		<b>2. REPORT DATE</b> March 1991	<b>3. REPORT TYPE AND DATES COVERED</b> Final 29 Oct - 1 Nov and 5-8 Nov 90	
<b>4. TITLE AND SUBTITLE</b> Waste Analysis Plan and Waste Characterization Survey, Barksdale AFB LA			<b>5. FUNDING NUMBERS</b>	
<b>6. AUTHOR(S)</b>  Chung H. Yen				
<b>7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)</b> Armstrong Laboratory Occupational and Environmental Health Directorate Brooks AFB TX 78235-5000 (Formerly: AF Occupational and Environmental Health Laboratory (AFOEHL))			<b>8. PERFORMING ORGANIZATION REPORT NUMBER</b>  AL-TR-91-0033	
<b>9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)</b>			<b>10. SPONSORING/MONITORING AGENCY REPORT NUMBER</b>	
<b>11. SUPPLEMENTARY NOTES</b>				
<b>12a. DISTRIBUTION/AVAILABILITY STATEMENT</b>  Approved for public release; distribution is unlimited.			<b>12b. DISTRIBUTION CODE</b>	
<b>13. ABSTRACT (Maximum 200 words)</b>  At the request of HQ SAC/DEV, the AFOEHL conducted a waste analysis plan and waste characterization survey at Barksdale AFB (BAFB) on 29 Oct - 1 Nov and 5-8 Nov 90. The scope of this survey was to address hazardous waste management practices, explore opportunities for waste minimization, and to determine wastestreams. The survey team performed a shop-by-shop determination of hazardous wastestreams and met with hazardous waste managers to discuss their waste programs. A waste analysis plan for Barksdale AFB was developed in conjunction with a baseline analysis of identified hazardous wastestreams.				
<b>14. SUBJECT TERMS</b> Hazardous Waste      Waste Minimization Waste Analysis Plan      Waste Characterization Barksdale AFB LA			<b>15. NUMBER OF PAGES</b> 100	
			<b>16. PRICE CODE</b>	
<b>17. SECURITY CLASSIFICATION OF REPORT</b>  Unclassified	<b>18. SECURITY CLASSIFICATION OF THIS PAGE</b>  Unclassified	<b>19. SECURITY CLASSIFICATION OF ABSTRACT</b>  Unclassified	<b>20. LIMITATION OF ABSTRACT</b>  UL	

NSN 7540-01-280-5500

# ACKNOWLEDGEMENTS

The author wishes to thank the personnel at Barksdale AFB who provided information and logistics support during the survey. Ms Donna Kelly and Mr Neil Washburn of the Base Environmental Coordinator Office in Civil Engineering, 2CSG/DEV, were extremely supportive of the mission during the survey. We would also like to thank Capt Maria Reiter and her staff in the Base Bioenvironmental Engineering Services, USAF Hospital Barksdale/SGPB, for their administrative support.



<b>Accession For</b>	
NTIS GRA&I	<input checked="" type="checkbox"/>
DTIC TAB	<input type="checkbox"/>
Unannounced	<input type="checkbox"/>
Justification _____	
By _____	
Distribution/	
Availability Codes	
Dist	Avail and/or Special
A-1	

## Contents

	Page
SF 298	i
Acknowledgments	iii
List of Tables	v
I. Introduction	1
II. Survey Dates and Personnel	1
III. Objectives	1
IV. Background	2
V. Waste Analysis Plan - Barksdale AFB	2
A Overview of Waste Analysis Plan	2
B Waste Analysis Plan	3
C Summary of Baseline Analysis	3
D Summary of Analysis for Energy Recovery	3
VI. Findings	3
References	15
Appendix	
A Letter of Request	17
B Waste Analysis Plan Rationale	21
C Waste Oil as a Recyclable Material	23
D Analytical Data - Major Components	25
E Data from Analytical Laboratory	35
Distribution List	40

## List of Tables

Table		Page
1	Waste Characterization Analysis Plan	4
2	Baseline Analysis	8
3	Analysis for Energy Recovery	13

## I. INTRODUCTION

On 30 Sep 90, HQ SAC/DEV, contacted the Air Force Occupational and Environmental Laboratory (AFOEHL) to discuss a pending contract for \$238,000 to be awarded by Barksdale (BAFB) for the performance of a baseline Waste Analysis Plan (WAP). The WAP is required to complete a part B permit application for the Louisiana Department of Environmental Quality (LDEQ) as a Hazardous Waste Storage Facility. In preliminary discussions, the AFOEHL indicated that \$238,000 was an extremely high bid possibly due to a decision by LDEQ to sample a number of non-hazardous waste streams. On 2 Oct 90 HQ SAC/DEV requested we perform a site visit to assist base personnel in preparing a Waste Analysis Plan (WAP).

In response to a request by the LDEQ to have all waste streams analyzed by 1 Dec 90, HQ SAC/DEV verbally requested we expand the scope of our effort to include sampling of all hazardous waste streams on BAFB.

## II. SURVEY DATES AND PERSONNEL

### A. Presurvey 29 Oct 90 thru 1 Nov 90

Capt McMullen	AFOEHL/EQH
Capt C. Yen	AFOEHL/EQH

### B. Sampling Survey 5-8 Nov 90

2Lt McLaurin	AFOEHL/EQW
Sgt Davis	AFOEHL/EQW
A1C Feagin	AFOEHL/EHB

## III. OBJECTIVES

### A. Presurvey

1. Review applicable Resource Conservation and Recovery Act (RCRA) hazardous waste requirements with appropriate base personnel.
2. Review LDEQ requirements for a WAP suited for BAFB.
3. Review base records for all waste streams to develop a current list of potential hazardous waste streams.
4. Visit each shop identified as a potential hazardous waste stream generator to collect information for follow-on sampling for lab analysis.

Note: This report was accomplished by the Air Force Occupational and Environmental Health Laboratory (AFOEHL), which is now the Armstrong Laboratory, Occupational and Environmental Health Directorate.

## **B. Waste Stream Sampling**

1. Collect a representative sample for each waste stream identified and verified as a result of the presurvey investigation.

## **IV. BACKGROUND**

### **A. Barksdale Air Force Base**

Barksdale Air Force Base is located in Bossier City, Louisiana. The base is the home of 2nd Bomber Maintenance Wing (BMW) and host to the 8th Air Force Headquarters, 917th Tactical Fighter Group (TFG) - an Air National Guard outfit, and many other tenants.

### **B. Points of Contacts**

Capt Reiter	Chief, Bioenvironmental Engineering Services
SSgt Barber	NCOIC, Bioenvironmental Engineering Services
Donna Kelly	2 CSG/DEV Environmental Coordinator
Neil Washburn	2 CSG/DEV Environmental Engineer
SSgt Davis	2 CSG/DEMW Supervisor, Waste Water Shop

### **C. Part B Permit Application and Waste Analysis Plan**

BAFB is currently storing hazardous waste under authority granted with a Part A or "Interim Status" permit. The base is required by the Louisiana Department of Environmental Quality (LDEQ) to submit the appropriate drawings and technical information to obtain a Part B or "Permanent Status" permit.

One of the technical requirements for a Part B permit is the WAP. This survey was accomplished to meet this requirement.

## **V. WASTE ANALYSIS PLAN - BARKSDALE AFB**

### **A. Overview of Waste Analysis Plan**

Under 40 CFR 265.13, there are basically three general requirements for waste analysis for facilities that either treat, store and/or dispose hazardous wastes:

- facilities must have a current waste analysis before treating, storing, or disposing of any waste

- facilities must have and follow a written WAP

- facilities that accept waste from off-site must inspect and, if necessary, sample and analyze each waste stream from off-site generators

The first requirement is intended to ensure availability of information for treatment, storage and/or disposal in accordance with 40 CFR 265 or 264. The second requirement is intended to provide specifications of parameters to be tested and the rationale for each: the analytical and sampling methods to be



used, the frequency of reanalysis or of a review to assess if analysis is needed, any analyses that are to be provided by generators, and methods to be used to meet specific waste analysis requirements. The third requirement enumerates the information to be added to the WAP to ensure compliance in accepting off-site wastes.

Sections 40 CFR 264 and 265 regulate permitted facilities and interim status facilities, respectively, Barksdale AFB is required to develop, implement and document a working and current WAP in order to operate as a permitted Part B storage facility.

#### B. Waste Analysis Plan

Table 1 contains the Waste Analysis Plan which specifies current hazardous waste stream on Barksdale AFB. It also includes, in compliance with 40 CFR 264.13, physical description, waste stream code, sampling method, sampling frequency, parameters of analysis, SW 846 test methods, Department of Transportation (DOT) shipping name and hazard class, disposal method or base, and EPA hazardous waste numbers. Rationales for sampling method, sampling frequency and selection of parameters are attached in Appendix B.

#### C. Summary of Baseline Analysis

A summary of baseline analytical data from 5-8 November 90 sampling survey is presented in Table 2, Baseline Analysis. The raw laboratory analytical data are in Appendix D, Toxicity Characteristic Leaching Procedure (TCLP), analysis of metals include arsenic, barium, chromium, cadmium, lead, selenium, silver, and mercury; they are expressed in milligram(s) of metal per liter (mg/L) of leachate. TCLP volatile organic chemicals (VOC) include benzene, carbon tetrachloride, chlorobenzene, chloroform, 1,2-dichloroethane, 1,1-dichloroethylene, methyl ethyl ketone, tetrachloroethylene, trichloroethylene, and vinyl chloride; they are expressed in milligram(s) of VOC per kilogram (mg/kg) of leachate.

#### D. Summary of Analysis for Energy Recovery

The characterization data for energy recovery of five oil phase fluid from oil/water separators is presented in Table 3, Analysis for Energy Recovery. Under 40 CFR 266.40, used oil fuel used for energy recovery that does not exceed maximum allowable levels (MAL) of specification (See end of Table 3 for MAL limits) are deemed specification used oil and are minimally regulated to the analysis and record keeping requirements under 40 CFR 266.43(b) (1) and (6). Used oil that exceed the MAL limits are termed "off-specification used oil fuel." Off-specification used oils are more rigorously regulated under subpart E - Used Oil Burned for Energy Recovery - of 40 CFR 266.

### VI. FINDINGS

A. The original WAP as proposed by the contractor identified 107 hazardous waste streams. After review of RCRA and LDEQ regulations, recyclable materials were dropped from the WAP which reduced the waste streams to 25.

Table 1. Waste Characterization Analysis Plan

Waste Stream	Physical Description	Waste Stream Code	Sampling Method	Sampling Frequency	Parameters	SW 846 Test Method	DOT Shipping		EPA Hazardous Waste #
							Name and Hazard Class	Disposal Method	
917 TFC/MAEA Jet Engine Bldg 6825 Citra Kleen HD	Brown Liquid	ES-6825-01	COLIMASA	Annual	Flashpoint Cadmium Chromium Lead	1010 7090, 7091 7195, 9196 7420, 7421	Waste Flammable Liquid n.o.s.	DRMO	D001 D006 D007 D008
2FMS/MAFC Corrosion Control Bldg 5755 Waste Paint	Grey Solid	CC-5755-01	Composite	Annual	Cadmium Chromium Lead	7090, 7091 7195, 7196 7420, 7421	Hazardous Waste Solid n.o.s. (Cadmium and Chromium and Lead Contaminated Material)	DRMO	D006 D007 D008
2FMS/MAFC Corrosion Control Bldg 5755 Waste Glass Media	Grey Solid	CC-5755-02	Composite	Annual	Cadmium Chromium Lead	7090, 7091 7195, 7196 7420, 7421	Hazardous Waste Solid n.o.s. (Cadmium and Chromium and Lead Contaminated Material)	DRMO	D006 D007 D008
2FMS/MAFC Corrosion Control Bldg 5755 Waste Plastic Media	Grey Solid	CC-5755-03	Composite	Annual	Cadmium Chromium Lead	7090, 7091 7195, 7196 7420, 7421	Hazardous Waste Solid n.o.s. (Cadmium and Chromium and Lead Contaminated Material)	DRMO	D006 D007 D008
2FMS/MAFC Corrosion Control Bldg 5755 Kinse Water	Grey Water	CC-5755-04	Composite	Annual	Cadmium Chromium Lead	7090, 7091 7195, 7196 7420, 7421	Water w/ Waste Paint. (Cadmium and Chromium and Lead Contaminated Material)	DRMO	D006 D007 D008

Table 1. Waste Characterization Analysis Plan

Waste					DOT Shipping			EPA	
Waste Stream	Physical Description	Waste Stream Code	Sampling Method	Sampling Frequency	Parameters	SW 846 Test Method	Name and Hazard Class	Disposal Method	Hazardous Waste #
2FMS/MAFP Jet Engine Bldg 5778 Carbon Remover	Black Oily Liquid	ES-5778-01	COLIWASA	Annual	Flashpoint Cresylic Acid Methylene CL <sub>2</sub> Chromium Lead	1010 8040, 8250 7195, 7196 7420, 7421	Waste Combustible Liquid n.o.s.	DRMO	D001 F004 F002 D007 D008
2FMS/MAFP Jet Engine Bldg 5778 Finger Print Remover	Black Oily Liquid	ES-5778-02	COLIWASA	Annual	Flashpoint Naptha Phenol CL <sub>2</sub> Benzene Chromium Lead	1010 8040, 8250 8010, 8120, 8250 7195, 7196 7420, 7421	Waste Combustible Liquid n.o.s.	DRMO	D001 D001 F002 D007 D008
2FMS/MAFP Jet Engine Bldg 5778 PO-680	Dark Oily Liquid	ES-5778-03	COLIWASA	Annual	Flashpoint Naptha Phenol CL <sub>2</sub> Benzene Chromium Lead	1010 8040, 8250 8010, 8120, 8250 7195, 7196 7420, 7421	Waste Combustible Liquid n.o.s.	DRMO	D001 D001 F002 D007 D008
2FM/MAFCN NDI Bldg 5755 Emulsifier	Orange Liquid	ND-5755-01	COLIWASA	Annual	Flashpoint PD 680 Trichloroethane	1010 8010, 8240	Waste Flammable Liquid n.o.s.	DRMO	D001 D001 F001
2FMS/MAFCN NDI Bldg 5755 Penetrant	Greenish Liquid	ND-5755-02	COLIWASA	Annual	Flashpoint PD 680 Trichloroethane	1010 8010, 8240	Waste Flammable Liquid n.o.s.	DRMO	D001 D001 F001
2FMS/MAFCN NDI Bldg 5755 Developer	Clear Liquid	ND-5755-03	COLIWASA	Annual	Flashpoint	1010	Waste Flammable Liquid n.o.s.	DRMO	N/A
2FMS/MAFCN NDI Bldg 5755 1,1,1- Trichloro Ethane	Clear Liquid	ND-5755-04	COLIWASA	Annual	Flashpoint PD 680	1010	Waste 1,1,1,- Trichloroethane	DRMO	D001 D001

Table 1. Waste Characterization Analysis Plan

Waste Stream	Physical Description	Waste Stream Code	Sampling Method	Sampling Frequency	Parameters	SW 846 Test Method	DOT Shipping		EPA Hazardous Waste #
							Name and Hazard Class	Disposal Method	
2FHS/NAFC Battery Shop Bldg 5743 Neutralized Niacid Soln	Clear Liquid	BS-5743-01	Dipper	Annual	pH Nickel Cadmium	1110 7520, 7521 7090, 7091	Hazardous Waste Liquid Contaminated with Nickel	DRMO	D006
2CSG/SSRV Auto Hobby Bldg 4143 Waste Paint	Greyish Liquid	A4-4143-01	COLIWASA	Annual	Flashpoint MEK Toluene Xylene Methylene CL <sub>2</sub> Chromium Lead Mineral Spirits	1010 8015, 8240 8020, 8024 8020, 8240 7095, 7096 7420, 7421	Waste Paint Related Material Mixture Flammable Liquid	DRMO	D001 F005 F005 F003 F001 D007 D008 D001
2CSG/DEM Paint Shop Bldg 4432 Waste Paint	Greyish Liquid	PS-4432-01	COLIWASA	Annual	Flashpoint MEK Toluene Xylene Methylene CL <sub>2</sub> Chromium Lead	1010 8015, 8240 8020, 8024 8020, 8240 7190, 7191 7420, 7421	Waste Paint Related Material Mixture Flammable Liquid	DRMO	D001 F005 F005 F003 F001 D007 D008
2FMS/NAFC Corrosion Control Bldg 6626 Waste Paint	Greyish Liquid	CC-6626-01	COLIWASA	Annual	Flashpoint MEK Toluene Xylene Methylene CL <sub>2</sub> Mineral Spirits Chromium Lead	1010 8015, 8240 8020, 8024 8020, 8240 7195, 7196 7420, 7421	Waste Paint Related material Mixture Flammable Liquid	DRMO	D001 F005 F005 F003 F002 F001 D007 D008
2FM/NAFC Corrosion Control Bldg 6626 Chemical Paint Stripper	Greyish Liquid	CC-6626-02	COLIWASA	Annual	Flashpoint Cresylic Acid Methylene CL <sub>2</sub> CL <sub>2</sub> Benzene Mineral Spirits Cadmium Chromium Lead	1010 8040, 8250 8010, 8120, 8250 7090, 7091 7195, 7196 7420, 7421	Waste paint w/strippers Heavy Metals, and Acids	DRMO	D001 F004 F002 F002 F002 D001 D006 D007 D007

Table 1. Waste Characterization Analysis Plan

Waste Stream	Physical Description	Waste Stream Code	Sampling Method	Sampling Frequency	Parameters	SW 846 Test Method	DOT Shipping Name and Hazard Class	Disposal Method	EPA Hazardous Waste #
2FMS/MAFC Corrosion Control Bldg 6626 Rinse Water	Greyish Water	CC-6626-03	COLIHASA	Annual	Cadmium Chromium Lead	7090, 7091 7195, 7196 7420, 7421	Water w/ Waste Paint Heavy Metals	DRMO	D006 D007 D008
917 TFG/MAEA Corrosion Control Bldg 6824 Waste Paint	Greyish Liquid	CC-6824-01	COLIHASA	Annual	Flashpoint MEK Toluene Xylene Methylene CL <sub>2</sub> Chromium Lead	1010 8015, 8240 8020, 8024 8020, 8240 7195, 7196 7420, 7421	Waste Paint Related Material Mixture Flammable Liquid	DRMO	D001 F005 F005 F003 F001 D007 D008

Table 2. Baseline Analysis

Waste Stream	Date Sampled & Number	Base Sample Comments	FP	RX (mg/Kg)	Corr	Comp (%)	Metals	Volatiles (mg/Kg)
2FMS/MAFP Jet Engine Bldg 5778 Carbon Remover	11-07-90 GT901344	None	<82.4°F I	Not Performed	Not Performed	Oil Phase C17 - C32 = 93% C9 - C11 = 6% 4-methyl-2-pentanol = 1% Water Phase H <sub>2</sub> O = 13% C16 - C32 = 75% C9 - C11 = 7% 4-methyl-2-pentanol = 4% Alpha amino iso-butyric acid = 1%	Hg = 0.015 Also see note at the end of table Sample Exploded	Not Performed
2FMS/MAFP Jet Engine Bldg 5778 Finger Print Remover	11-07-90 GT901345	pH = 10.3	<82.4°F I	Cyanide < 0.2 Sulfide < 10 Not Reactive	Not Performed			Not Performed
2FMS/MAFP Jet Engine Bldg 5778 PD-680	11-07-90 GT901346	None	<82.4°F I	Not Performed NR	Not Performed NR	Detailed in Appendix D-6	Not Performed NR	Not Performed NR
2FMS/MAFCN NDI Bldg 5755 Emulsifier	11-08-90 GT901351	pH = 8.1	>140°F NI	Cyanide = <0.2 Sulfide = <10 Not Reactive	SINC	Water = 14% Ethylene Glycol = 60% Heavy Alcohol = 26%	Ar = 2.5 Ba = <0.5 Cr = 0.29 Cd = <0.05 Pb = <3. Se = <3. Ag = <0.0005 Hg = <0.0005	Ar = ND Ba = ND Cr = ND Cd = ND Pb = ND Se = ND Ag = ND Hg = ND
2FMS/MAFCN NDI Bldg 5755 Penetrant	11-08-90 GT901352	None	<82.4°F I			Phthalates = 59% C2 - C5 decalins = 23% 2-Ethylhexyl diphenylphosphate = 18%		7 = 30 Ar = ND Ba = ND Cr = ND Cd = ND Pb = ND Se = ND Ag = ND Hg = ND
2FMS/MAFCN NDI Bldg 5755 Developer	11-08-90 GT901353	pH = 8.0	>140°F NI	Cyanide = <0.2 Sulfide = <10 Not Reactive	SINC	Detailed in Appendix D-7	Ar = <3. Ba = <0.5 Cr = 54 Cd = <0.05 Pb = <3. Se = <3. Ag = <0.05 Hg = <0.0005	Ar = ND Ba = ND Cr = ND Cd = ND Pb = ND Se = ND Ag = ND Hg = ND

Table 2. Baseline Analysis

Waste Stream	Base Sample Date Sampled & Number	Comments	FP	RX (mg/Kg)	Corr	Comp (%)	**TCLP (mg/L) Metals	*TCLP Volatiles (mg/kg)
2FMS/MAFC Corrosion Control Bldg 5755 Waste Paint	11-07-90 GT901347	pH = 5.9	<82.4°F I	Not Performed	SINC	Detalled in Appendix D-4	Cr = 10 All others = ND	Not Performed
2FMS/MAFC Corrosion Control Bldg 5755 Waste Glass Media	11-07-90 GD901349	None	NR	NR	NR	NR	Cd = 9.9 Cr = 22.0 All others = ND or Below RL	NR
2FMS/MAFC Corrosion Control Bldg 5755 Waste Plastic Media	11-07-90 GD901350	None	NR	NR	NR	NR	Cd = 72 All others = ND or Below RL	NR
2FMS/MAFC Corrosion Control Bldg 5755 Rinse Water	11-07-90 GT901348	pH = 7.9	<140°F I	Cyanide = <0.2 Sulfide = <10 Not Reactive	SINC	100% Water	All = ND or Below RL	NR

Table 2. Baseline Analysis

Waste Stream	Date Sampled & Number	Base Sample Comments	FP	RX (mg/kg)	Corr	Haj Comp (%)	**TCLP	
							Metals (ppm)	Volatiles (ppm)
2FMS/MAFC Corrosion Control Bldg 6626 Waste Paint	11-07-90 GT901341	pH = 7	<82.4°F I	Cyanide = <0.2 Sulfide = 10 Not Reactive	SINC	Detailed in Appendix D-1	Ar = <0.3 Ba = <0.5 Cr = 7.4 Cd = <0.05 Pb = <0.3 Se = <0.3 Ag = <0.05 Hg = 0.0007	Not Performed
2FMS/MAFC Corrosion Control Chemical Bldg 6626 Paint Stripper	11-07-90 GT901342	pH = 10.4	<82.4°F I	Cyanide = <0.2 Sulfide = <10 Not Reactive	SINC	Detailed in Appendix E page 45	Ar = <0.3 Ba = <0.5 Cr = <0.05 Cd = <0.05 Pb = <0.3 Se = <0.3 Ag = <0.05 Hg = 0.0021	7 = 6100 All Others = 480 = ND
2FMS/MAFC Corrosion Control Bldg 6626 Rinse Water	11-08-90 GT901343	pH = 9.4	>140°F NI	Cyanide = <0.2 Sulfide = <10 Not Reactive	SINC	Water = 96% pheno1 = 4%	Ar = 0.7 Ba = 4.2 Cr = 340 Cd = 8.1 Pb = 54 Se = <0.3 Ag = 0.07 Hg = 0.0021	11 = 6.4 All Others = ND
917 TFG/MAEA Corrosion Control Bldg 6824 Waste Paint	11-07-90 GT901340	None	<82.4°F I	Cyanide = <0.2 Sulfide = 10 Not Reactive	NR	Detailed in Appendix D-2	Ar = <0.3 Ba = <0.5 Cr = 45 Cd = 6.2 Pb = <0.3 Se = <0.3 Ag = <0.05 Hg = 0.0050	All = ND
917 TFG/MAEA Jet Engine Bldg 6827 Citra Kleen HD	11-07-90 GT901338	None	>140°F NI	Cyanide = <0.2 Sulfide = <10	NR	Detailed in Appendix D-3	Ar = <0.3 Ba = <0.5 Cr = <0.05 Cd = <0.05 Pb = <0.3 Se = <0.3 Ag = <0.05 Hg = <0.0002	Not Performed



Table 2. Baseline Analysis

Waste Stream	Base Sample Date Sampled & Number	Comments	FP	RX (mg/Kg)	Corr	Haj Comp (%)	**TCLP (mg/L)		*TCLP Volatiles (mg/Kg)
							Metals	Not Performed	
2FMS/MAFCN ND1 Bldg 5755 1,1,1-Trichloro ethane	11-08-90 GT901354	pH = 8.2 pH = 8.2	<82.4°F I	Not Reactive	SINC	Top (9%) Water = 4% Ethylene Glycol = 88% 1,1,1-Trichloroethane = 6% Dioxane = 2% Bottom (91%) 1,1,1-Trichloroethane = 51% C12-C17 Hydrocarbons = 43% Dioxane = 6%			6 = 4800 7 = 30 All Others = ND
2FMS/MAFC Battery Shop Bldg 5743 Neutralized Niacad Sol'n	11-07-90 GT901357 GT901358	TOX = <1.0 mg/L	>140°F NI	Cyanide = <0.2 Sulfide = 10 Not Reactive	pH = 9.2	Top = All Water Bottom = White Solids	Ar = <0.3 Ba = <0.5 Cr = 0.99 Cd = 9.2 Pb = <0.3	Se = <0.3 Ag = <0.05 Hg = <0.0005	All Others = ND
2CSG/SSRV Auto Hobby Bldg 4143 Waste Paint	11-08-90 GT901359	pH = 6.3	>140°F NI	Cyanide = <0.2 Sulfide = <10 Not Reactive	SINC	Detailed in Appendix D-8	Ar = 0.3 Ba = 2.6 Cr = 6.5 Cd = 16	Pb = 66 Se = <0.3 Ag = 0.35 Hg = <0.0005	11 = 350 13 = 72 All Others = ND
2CSG/DEM Paint Shop Bldg 4432 Waste Paint	11-08-90 GT901361	pH = 7.3	<82.4°F I	Cyanide = <0.2 Sulfide = <10 Not Reactive	SINC	Detailed in Appendix D-9	All = ND or below RL		7 = 730 All Others = ND

\*Following numerical notations denote TCLP VOC analyte:

<u>Numeral</u>	<u>VOC Analyte</u>	<u>Limits of Detection (mg/Kg)</u>
1	Benzene	8.0
2	Carbon Tetrachloride	7.5
3	Chlorobenzene	6.5
4	Chloroform	9.0
5	1,2-Dichloroethane	12
6	1,1-Dichloroethylene	6.0
7	Methyl Ethyl Ketone	19
8	Tetrachloroethylene	7.5
9	Trichloroethylene	6.5
10	Vinyl Chloride	8.5
11	o - Cresol	200.0
12	m - Cresol	200.00
13	p - Cresol	200.00
14	1,4 - Dichlorobenzene	7.5
15	2,4 - Dinitrotoluene	0.13
16	Hexachlorobenzene	0.13
17	Hexachloro-1,3-butadiene	0.5
18	Hexachloroethane	3.0
19	Nitrobenzene	2.0
20	Pentachlorophenol	100.00
21	Pyridine	5.0
22	2,4,5-Trichlorophenol	400.00
23	2,4,6-Trichlorophenol	2.0

ND: None Detected (Below Detection Limits)

NR: Not Required

SINC: Sample Is Not Corrosive

I: Ignitable

NI: Not Ignitable

RL: Regulatory Limit

TCLP VOC's analyzed by GC/MS according to EPA Method 8240

\*\*Following denotes TCLP metal analytes:

Ar	Arsenic
Ba	Barium
Cr	Chromium
Cd	Cadmium
Pb	Lead
Se	Selenium
Ag	Silver
Hg	Mercury

NOTE: TCLP metal samples exploded during digestion, they were not started again due to insufficient volumn for analysis.

**Table 3. Analysis for Energy Recovery**

	Date Sampled	Base Sample Number	Comments	Metals (ppm or mg/l)	Flashpoint	Total Halogens (%)
AGE & Fuels B.6438 OWS (Oil Phase)	11-08-90	GT901364	Spec	Ar = <0.3 Cd = 0.006 Cr = <0.01 Pb = <0.01	>140°F	<0.1

Spec. Signifies Specification Used Oil Fuel Under 40 CFR 260.40

Ar Signifies Arsenic

Cd Signifies Cadmium

Cr Signifies Chromium

Pb Signifies Lead

°F Signifies Degrees Fahrenheit

NOTE: Oil that exceeds the levels in the table below is deemed off-specification oil in accordance with 40 CFR 260.40.

**Off Specification Oil Parameters:**

Arsenic 5 ppm

Cadmium 2 ppm

Chromium 10 ppm

Lead 100 ppm

Flashpoint 100 degrees F minimum

Total Halogens 4,000 ppm or 0.4%

B. The LDEQ was contacted to resolve several administrative deficiencies they noted on a previous WAP submission. An amended WAF has been prepared by the AFOEHL for BAFB and incorporates changes to correct LDEQ specified deficiencies.

### References

1. United States Environmental Protection Agency "Identification and Listing of Hazardous Waste," 40 CFR 261.
2. Samplers and Sampling Procedures for Hazardous Waste Streams, EPA-600/2-80-018, January 1980.

**APPENDIX A**  
**Letter of Request**



DEPARTMENT OF THE AIR FORCE  
HEADQUARTERS STRATEGIC AIR COMMAND  
OFFUTT AIR FORCE BASE, NEBRASKA 68113-5001



2 OCT 1990

REPLY TO  
ATTN OF:

DEV

SUBJECT:

Emergency Request for a Hazardous Waste Assistance Survey

TO:

USAFOEHL/CC

1. Request your assistance in conducting a Hazardous Waste Assistance Survey at Barksdale AFB. The survey is required to respond to deficiencies identified by the Louisiana Department of Environmental Quality (LDEQ) in the Barksdale Hazardous Waste Permit Application. Specific attention should be addressed to LDEQ Comment Numbers 66 and 67 on pages 10 and 11 (Atch 1).

2. Written corrections of deficiencies must be submitted to the state by 24 Oct 90. We have requested a 120-day extension (Atch 2) but have not received approval. Therefore, we would appreciate an immediate response to this request so we can accomplish the survey in the established time frame.

2. This is a HQ SAC/DEV/SGBP coordinated letter. Point of contact is Ms Johnnie Shockley, HQ SAC/DEV, DSN 271-5303/4061.

HUGH M. STIRTS, GM-15  
Director, Environmental Management  
DCS/Engineering and Services

2 Atch

1. LDEQ Ltr, 18 Sep 90,  
w/Atchs

2. HQ SAC/DEV Ltr, 28 Sep 90

**APPENDIX B**  
**Waste Analysis Plan Rationale**



## APPENDIX B

### 1. SAMPLING METHOD RATIONALE: Composite Liquid Waste Sampler (COLIWASA)

The COLIWASA is probably the single most important hazardous waste sampler in use today. Based upon laboratory and field tests performed by environmental researchers and recommendations by the Environmental Protection Agency (EPA), the COLIWASA was adopted as the liquid waste sampler of choice. According to the EPA publication EPA-600/2-80-018 Jan 1980, "Samplers and Sampling Procedures for Hazardous Waste Streams," the COLIWASA permits the representative sampling of multiphase wastes of a wide range of viscosity, corrosivity, volatility, and solids content. It has a very simple design which allows ease of usage and rapid collection of samples, thereby minimizing the exposure of the sample collector to potential hazards from the wastes to be collected.

Two types of COLIWASA samplers are common: plastic and glass. The plastic type consists of translucent plastic (usually polyvinyl chloride) sampling tube. The glass COLIWASA is usually constructed of borosilicate glass plumbing pipe as the sampling tube and Teflon plastic stopper rod. Disposable glass COLIWASA samplers were used in this survey.

### 2. PARAMETER SELECTION RATIONALE:

The parameters chosen in the Waste Analysis Plan were based on the current generators knowledge for each process and chemical constituent information provided on material safety data sheets.

### 3. ANALYSIS METHOD SELECTION RATIONALE:

The SW-846 analytical test methods designated on the waste analysis plan were chosen based upon the parameters selected in order to provide continual and comprehensive characterization of the chemical and physical properties of each waste stream.

**APPENDIX C**  
**Waste Oil as a Recyclable Material**

## APPENDIX C

### WASTE OIL AS A RECYCLABLE MATERIAL

By definition in 40 CFR 261.1 (c), material is recycled if it is used, reused or reclaimed. Examples are recovery of lead from spent batteries and the regeneration of spent solvents. A material is used or reused if it is either:

(i) Employed as an ingredient (including used as an intermediate) in an industrial process to make a produce (for example, distillation bottoms from one process used as feedstock in another process). However, material will not satisfy this condition if distinct components of the material are recovered as separate end products (as when metals are recovered from metal-containing secondary materials); or

(ii) Employed in a particular function or application as an effective substitute for commercial product (for example, spent pickle liquor used as phosphorus precipitant and sludge conditioner in wastewater treatment). A material is reclaimed if it is processed to recover a usable product or if it is regenerated.

40 CFR 261.6 provides detailed guidance for all recycling issues. Section 261.6(a)(2)(ii) specifically exempts all hazardous waste burned for energy recovery in an industrial boiler or furnace. This includes waste oils, fluids and fuels such as the waste oils, fluids and fuel recycled at Barksdale AFB. These materials are still minimally regulated under section 266.43 which primarily addresses record keeping for waste oil used for energy recovery.

The Louisiana Department of Environmental Quality (LDEQ) addresses recycling in LAC 33:V.41. However only waste oils which exhibit one or more hazardous characteristics or contain a listed hazardous waste are regulated under Chapter 41. The waste oil and fluid at Barksdale AFB were analyzed and found to be nonhazardous.

**APPENDIX D**  
**Analytical Data - Major Components**

AIR FORCE  
OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AFB, TEXAS, 78235-5501

REPORT OF ANALYSIS

BASE SAMPLE NO: GT901341                      OEHL SAMPLE NO: 90068808  
SAMPLE TYPE:        WASTE, HAZARDOUS/TOXIC/DISPOSAL  
SITE IDENTIFIER: FAWA000A                      DATE RECEIVED: 901109  
DATE COLLECTED: 901107                      DATE REPORTED: 910201  
SAMPLE SUBMITTED BY: 2nd Strategic Hosp./SGPB

---

RESULTS

---

<u>Test</u>	<u>Results</u>	<u>Units</u>	<u>EPA Method</u>
-------------	----------------	--------------	-------------------

Comments:

SAMPLE IS (TOP 77%) 23% TOLUENE AND BUTYL ACETATE, 21% METHYL ETHYL KETONE, 16% UNIDENTIFIED ACETATES, 8% XYLENES, 6% PHTHALATES AND 5% UNIDENTIFIED HYDROCARBON, 4% C7-C11 HYDROCARBONS (ALKANES AND CYCLOALKANES), 3% ISOPROPANOL, 3% METHYLENE CHLORIDE, 3% ETHYL ACETATE, 2% 2-HEPTANE, 2% CELLOSOLVE ACETATE, 2% METHYL ISOBUTYL KETONE, 1% ISOBUTANOL AND 1% BUTANOL. (MIDDLE 10%) 100% PINK SOLIDS. (MIDDLE 3%) 80% WATER, 11% METHYL ETHYL KETONE, 7% C1-C4 ALCOHOLS, 1% UNIDENTIFIED ACETATES AND 1% TOLUENE. (BOTTOM 5%) 100% PINKISH AND SILVER COLORED SOLIDS, LOOKS LIKE PAINT WASTE.

SGT ROBERT P. DAVIS/BARKSDALE AFB

< - Signifies none detected and the detection limits.

Analyzed by: Datachem

Reviewed by: \_\_\_\_\_

Michael J. Wantland, TSgt, USAF  
NCOIC Occupational Chemistry Branch

AIR FORCE  
OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AFB, TEXAS, 78235-5501

REPORT OF ANALYSIS

BASE SAMPLE NO: GT901340                      OEHL SAMPLE NO: 90068807  
SAMPLE TYPE:            WASTE, HAZARDOUS/TOXIC/DISPOSAL  
SITE IDENTIFIER: FACC174A                      DATE RECEIVED: 901109  
DATE COLLECTED: 901107                      DATE REPORTED: 910201  
SAMPLE SUBMITTED BY: 2nd Strategic Hosp./SGPR

---

RESULTS

---

<u>Test</u>	<u>Results</u>	<u>Units</u>	<u>EPA Method</u>
-------------	----------------	--------------	-------------------

Comments:

SAMPLE IS (TOP 20%) 23% TOLUENE, 20% METHYL ETHYL KETONE, 15% ETHYL BETA-ETHOXYPROPIONATE, 6% ISO-PROPANOL, 6% N-BUTYL ACETATE, 6% XYLENES, 4% METHYL ISOBUTYL KETONE, 3% N-BUTANOL, 3% METHYL CYCLOHEXANE, 3% CELLOSOLVE ACETATE, 2% WATER, 2% HEPTANE, 2% ETHYL BENZENE, 2% 2-HEPTANONE, 2% UNKNOWN ACETATE COMPOUND AND 1% ETHYL ACETATE. (MIDDLE 67%) 79% WATER, 8% METHYL ETHYL KETONE, 6% ISO-PROPANOL, 2% N-BUTANOL, 2% N-BUTYL ACETATE, 2% ETHYL BETA-ETHOXYPROPIONATE AND 1% CELLOSOLVE ACETATE. (BOTTOM 13%) 100% SOLID.

< - Signifies none detected and the detection limits.

Analyzed by: Datachem

Reviewed by: \_\_\_\_\_

Michael J. Wantland, TSgt, USAF  
NCOIC Occupational Chemistry Branch

AIR FORCE  
OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AFB, TEXAS, 78235-5501

REPORT OF ANALYSIS

BASE SAMPLE NO: GT901338      OEHL SAMPLE NO: 90068806  
SAMPLE TYPE:      WASTE, HAZARDOUS/TOXIC/DISPOSAL  
SITE IDENTIFIER: FAPR181A      DATE RECEIVED: 901109  
DATE COLLECTED: 901107      DATE REPORTED: 910201  
SAMPLE SUBMITTED BY: 2nd Strategic Hosp./SGPB

917 TFG/MAEA Jet Engine Citraklean HD      RESULTS

<u>Test</u>	<u>Results</u>	<u>Units</u>	<u>EPA Method</u>
Arsenic	<0.3	mg/L	3020/7060
Barium	<0.5	mg/L	3010/7080
Cadmium	<0.05	mg/L	3010/7130
Chromium	<0.05	mg/L	3010/7190
Lead	<0.3	mg/L	3010/7420
Mercury	<0.0002	mg/L	7470
Selenium	<0.3	mg/L	3020/7740
Silver	<0.05	mg/L	3010/7760
Flash Point (closed cup)	>140	degrees F	1010
Corrosivity	NP		1110
Hydrogen ion (pH)	NP		1110
Cyanide (total)	<0.2		SW 846 SEC 8.3
Sulfides	<10.0	mg/L	SW 846 SEC 8.3
Major components	SN		

NP : Test Not Performed

SN : See comment.

Comments:

SAMPLE IS 48% WATER, 27% TERPENES, 13% 1-BUTOXY-PROPANOL, 6% ETHANOLAMINE AND 6% OLEIC ACID AND LINOLEIC ACID.

SGT ROBERT P. DAVIS/BARKSDALE AFB

< - Signifies none detected and the detection limits.

TO:

AFOEHL/EQ  
BROOKS AFB TX 78235-5501

PAGE 1(Cont'd)

AIR FORCE  
OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AFB, TEXAS, 78235-5501

REPORT OF ANALYSIS

BASE SAMPLE NO: GT901347                      OEHL SAMPLE NO: 90068814  
SAMPLE TYPE:            WASTE, HAZARDOUS/TOXIC/DISPOSAL  
SITE IDENTIFIER: XXXX000A                      DATE RECEIVED: 901109  
DATE COLLECTED: 901107                      DATE REPORTED: 910201  
SAMPLE SUBMITTED BY: 2nd Strategic Hosp./SGPB

---

RESULTS

---

<u>Test</u>	<u>Results</u>	<u>Units</u>	<u>EPA Method</u>
-------------	----------------	--------------	-------------------

Comments:

SAMPLE IS (TOP 95%) 31% UNIDENTIFIED ACETATES, 26% METHYL ETHYL KETONE, 13% TOLUENE, 9% BUTYL ACETATE, 8% XYLENES, 5% ETHYL ACETATE, 3% OCTANE, 2% ISOPROPANOL, 2% METHYL ISOBUTYL KETONE AND 1% ACETOXY BUTENE. (BOTTOM 5%) 100% DARK BLUE AND GREY SILVER PARTICLES, MAY BE PAINT CHIPS.                      SGT ROBERT P.

DAVIS/BARKSDALE AFB

< - Signifies none detected and the detection limits.

Analyzed by: Datachem

Reviewed by:  \_\_\_\_\_

Michael J. Wantland, TSgt, USAF  
NCOIC Occupational Chemistry Branch



AIR FORCE  
OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AFB, TEXAS, 78235-5501

REPORT OF ANALYSIS

BASE SAMPLE NO: GT901344                      OEHL SAMPLE NO: 90068811  
SAMPLE TYPE:            WASTE, HAZARDOUS/TOXIC/DISPOSAL  
SITE IDENTIFIER:                                      DATE RECEIVED: 901109  
DATE COLLECTED: 901107                              DATE REPORTED: 910201  
SAMPLE SUBMITTED BY: 2nd Strategic Hosp./SGPB

---

RESULTS

---

<u>Test</u>	<u>Results</u>	<u>Units</u>	<u>EPA Method</u>
Arsenic	NP	mg/L	3020/7060
Barium	NP	mg/L	3010/7080
Cadmium	NP	mg/L	3010/7130
Chromium	NP	mg/L	3010/7190
Lead	NP	mg/L	3010/7420
Mercury	NP	mg/L	7470
Selenium	NP	mg/L	3020/7740
Silver	NP	mg/L	3010/7760
Corrosivity	NP		1110
Hydrogen ion (pH)	NP		1110
Cyanide (total)	NP		SW 846 SEC 8.3
Sulfides	NP	mg/L	SW 846 SEC 8.3
Flash Point (closed cup)	82.4	degrees F	1010
Major components	SN		

NP            : Test Not Performed

SN            : See comment.

Comments:

SAMPLE IS 56% DICHLOROBENZENE, 29% CRESOL, 4% C4-C5 BENZENES, 3%  
WATER, 3% PHENOL, 3% CHLOROBENZENE, 1% NAPHTHALENE AND 1%  
HYDDROCARBON (>C20 ALKANE).                      SGT ROBERT P. DAVIS/BARKSDALE  
AFB

TO:

AFOEHL/EQ  
BROOKS AFB TX 78235-5501

PAGE 1 (Cont'd)

AIR FORCE  
OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AFB, TEXAS, 78235-5501

REPORT OF ANALYSIS

BASE SAMPLE NO: GT901346                      OEHL SAMPLE NO: 90068813  
SAMPLE TYPE:            WASTE, HAZARDOUS/TOXIC/DISPOSAL  
SITE IDENTIFIER:                                      DATE RECEIVED: 901109  
DATE COLLECTED: 901107                              DATE REPORTED: 910201  
SAMPLE SUBMITTED BY: 2nd Strategic Hosp./SGPB

---

RESULTS

---

<u>Test</u>	<u>Results</u>	<u>Units</u>	<u>EPA Method</u>
Arsenic	NP	mg/L	3020/7060
Barium	NP	mg/L	3010/7080
Cadmium	NP	mg/L	3010/7130
Chromium	NP	mg/L	3010/7190
Lead	NP	mg/L	3010/7420
Mercury	NP	mg/L	7470
Selenium	NP	mg/L	3020/7740
Silver	NP	mg/L	3010/7760
Corrosivity	NP		1110
Hydrogen ion (pH)	NP		1110
Cyanide (total)	NP		SW 846 SEC 8.3
Sulfides	NP	mg/L	SW 846 SEC 8.3
Flash Point (closed cup)	82.4	degrees F	1010
Major components	SN		

NP            : Test Not Performed

SN            : See comment.

Comments:

SAMPLE IS 88% C10-C13 HYDROCARBONS (ALKANES, CYCLOALKANES, AND AROMATICS) AND 12% MIXED ESTERS OF NEOPENTYL POLYOLS.  
SGT ROBERT P. DAVIS/BARKSDALE AFB

TO:

AFOEHL/EQ  
BROOKS AFB TX 78235-5501

D-6  
31

PAGE 1 (Cont'd)

LABORATORY ANALYSIS REPORT AND RECORD (GENERAL)		DATE
TO:	FROM: Brooks Air Force Base	
SAMPLE IDENTITY Bulk Material		DATE RECEIVED November 27, 1990
SAMPLE FROM		LAB CONTROL NR
TEST FOR Bulk Identification and TCLP Test		

AF-5611

Sample Identification

Base # (OEHL#)	DataChem #	Ignitability at 60°C	pH	Bulk Components to 1% by GC/MS	Concentration (%)
GT901353 58820	46469	1	260	18.0	Water

*Develiger Tank  
NOI Bkg-5775*

Traces of benzoic acid, triphenyl phosphine oxide, and 3,3'-Dichloro diphenyl sulphone were detected 1.

Reactivity

mg/Kg

Cyanide <0.2  
Sulfide <10

TCLP Metals Results

mg/L

Arsenic <3.  
Barium <0.5  
Chromium 54.  
Cadmium <0.05  
Lead <3.  
Selenium <3.  
Silver <0.05  
Mercury <0.0005

TCLP Pesticides

mg/L

Endrin <0.0001  
Lindane <0.0001  
Methoxychlor <0.0006  
Toxaphene <0.001  
Chlordane <0.0003  
Heptachlor <0.0001  
Heptachlor epoxide <0.0001

TCLP Herbicides

mg/L

2,4-D <0.0001  
2,4,5-TP (Silvex) <0.00005

Note: Ignitability, pH, TCLP Extraction, TCLP Metals, Mercury, Reactive Sulfide and Cyanide, TCLP Pesticides and TCLP Herbicides by EPA Methods 1010, 9040, 1311, 8010, 7470, 7070, 9012, 8080, and 8170 respectively

Requesting Agency (Mailing Address)

2d Street Hospital/SGPB  
Barksdale AFB, LA 71110-5300

Date Reported by DataChem: *January 29, 1991*  
Date Analyzed by DataChem: January 02, 1991

AIR FORCE  
OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AFB, TEXAS, 78235-5501

REPORT OF ANALYSIS

BASE SAMPLE NO: GT901359      DEHL SAMPLE NO: 90068823  
SAMPLE TYPE: WASTE, HAZARDOUS/TOXIC/DISPOSAL  
SITE IDENTIFIER:      DATE RECEIVED: 901109  
DATE COLLECTED: 901108      DATE REPORTED: 910204  
SAMPLE SUBMITTED BY: 2nd Strategic Hosp./SGPB

RESULTS

<u>Test</u>	<u>Results</u>	<u>Units</u>	<u>EPA Method</u>
-------------	----------------	--------------	-------------------

Comments:

PER MSGT. VAUGHN AND CONCURRENCE BY LT. MOLARIN (EQE) CHANGE TCLP METAL TO FULL TCLP.

SAMPLE IS (TOP 78%) 81% WATER, 8% TRIETHANOL AMINE, 3% 2-METHYL 2,4-PENTANEDIOL, 2% 1-NOR-BUTOXY 2-PROPANOL, 1% MYRISTIC ACID, 1% OLEIC ACID AND 1% UNIDENTIFIED OXYGEN CONTAINING COMPOUND. (MIDDLE 13%) 84% WATER, 4% ISOPROPANOL ALCOHOL, 3% ACETONE, 3% METHYL ETHYL KETONE, 3% PROPYLENE GLYCOL MONOMETHYL ETHER ACETATE, 2% C4 ALCOHOLS AND 1% PROPYLENE GLYCOL MONOMETHYL ETHER. (BOTTOM 9%) 100% SLUDGE.

< - Signifies none detected and the detection limits.

Analyzed by: Datachem

Reviewed by: 

Michael J. Wantland, TSgt, USAF  
NODIC Occupational Chemistry Branch

AIR FORCE  
OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AFB, TEXAS, 78235-5501

REPORT OF ANALYSIS

BASE SAMPLE NO: GT901361                      OEHL SAMPLE NO: 90068824  
SAMPLE TYPE:            WASTE, HAZARDOUS/TOXIC/DISPOSAL  
SITE IDENTIFIER:                                      DATE RECEIVED: 901109  
DATE COLLECTED: 901108                              DATE REPORTED: 910201  
SAMPLE SUBMITTED BY: 2nd Strategic Hosp./SGPE

---

RESULTS

---

<u>Test</u>	<u>Results</u>	<u>Units</u>	<u>EPA Method</u>
-------------	----------------	--------------	-------------------

Comments:

PER MSGT. VAUGHN AND CONCURRENCE BY LT. MCLARIN (EQE) CHANGE TCLP  
METAL TO FULL TCLP.

SAMPLE IS (TOP 95%) 86% C8-C14 HYDROCARBONS (ALKANES AND AROMATICS)  
AND 14% TOLUENE. (MIDDLE 3%) 93% WATER, 2% DIETHYLENE GLYCOL  
MONOBUTYL ETHER, 1% METHANOL, 1% ACETONE, 1% ISOPROPANOL, 1% BUTANOL  
AND 1% UNIDENTIFIED OXYGEN CONTAINING COMPOUND. (BOTTOM 2%) 100%  
SLUDGE.

< - Signifies none detected and the detection limits.

Analyzed by: Datachem

Reviewed by: \_\_\_\_\_

Michael J. Wantland, TSgt, USAF  
NCOIC Occupational Chemistry Branch

PAGE 3

**APPENDIX E**  
**Data from Analytical Laboratory**

AIR FORCE  
OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AFB, TEXAS, 78235-5501

REPORT OF ANALYSIS

BASE SAMPLE NO: GT901338      DEHL SAMPLE NO: 90068806  
SAMPLE TYPE: WASTE, HAZARDOUS/TOXIC/DISPOSAL  
SITE IDENTIFIER: FAPR181A      DATE RECEIVED: 901109  
DATE COLLECTED: 901107      DATE REPORTED: 910131  
SAMPLE SUBMITTED BY: 2nd Strategic Hosp./SGPS

RESULTS

<u>Test</u>	<u>Results</u>	<u>Units</u>	<u>EPA Method</u>
Arsenic	<0.3	mg/L	3020/70A0
Barium	<0.5	mg/L	3010/7090
Cadmium	<0.05	mg/L	3010/7130
Chromium	<0.05	mg/L	3010/7190
Lead	<0.3	mg/L	3010/7420
Mercury	<0.0002	mg/L	7470
Selenium	<0.3	mg/L	3020/7740
Silver	<0.05	mg/L	3010/7560
Flash Point (closed cup)	>140	degrees F	1010
Corrosivity	NP		1110
Hydrogen ion (pH)	NP		1110
Cyanide (total)	<0.2		SM 846 SEC 8.3
Sulfides	<10.0	mg/L	SM 846 SEC 8.3
Major components	SN		

NP : Test Not Performed

SN : See comment.

Comments:

SAMPLE IS 48% WATER, 27% TERPENES, 13% 1-BUTOXY-PROPANOL, 6% ETHANOLAMINE AND 6% OLFIC ACID AND LINOLEIC ACID.

SGT ROBERT P. DAVIS/BARKSDALE AFB

< - Signifies none detected and the detection limits.

TO:

AFDEHL/EQ  
BROOKS AFB TX 78235-5501

PAGE 1 (Cont'd)

AIR FORCE  
OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
SPDOKS AFB, TEXAS, 78738-5501

REPORT OF ANALYSIS

BASE SAMPLE NO: GT901338                      OEHL SAMPLE NO: 90068806  
SAMPLE TYPE:        WASTE. HAZARDOUS/TOXIC/DISPOSAL  
SITE IDENTIFIER: FAPR131A                      DATE RECEIVED: 901109  
DATE COLLECTED: 901107                      DATE REPORTED: 910131  
SAMPLE SUBMITTED BY: 2nd Strategic Hosp./SGPB

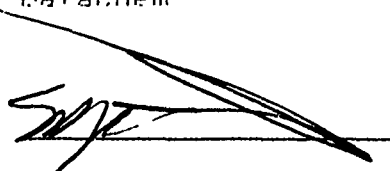
---

RESULTS

---

<u>Test</u>	<u>Results</u>	<u>Units</u>	<u>EPA Method</u>
-------------	----------------	--------------	-------------------

Analyzed by: Datachem

Reviewed by: 

Michael J. Wantland, TSgt, USAF  
NCOIC Occupational Chemistry Branch

PAGE 2



AIR FORCE  
OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AFB, TEXAS, 78235-5501

REPORT OF ANALYSIS

BASE SAMPLE NO: GT901340      DEHI SAMPLE NO: 90068802  
SAMPLE TYPE: WASTE, HAZARDOUS/TOXIC/DISPOSAL  
SITE IDENTIFIER: FADD124A      DATE RECEIVED: 901109  
DATE COLLECTED: 901107      DATE REPORTED: 910204  
SAMPLE SUBMITTED BY: 2nd Strategic Hosp./SGPR

RESULTS

Test	Results	Units	EPA Method
Arsenic	<0.3	mg/L	3020/2060
Barium	<0.5	mg/L	3010/2080
Benzene	<8.0	mg/L	
Cadmium	6.2	mg/L	3010/2130
Carbon Tetrachloride	<2.5	mg/L	
Chlordane	<0.0003	mg/L	
Chlorobenzene	<6.5	mg/L	
Chloroform	<9.0	mg/L	
Chromium	45	mg/L	3010/2190
m-Cresol	<0.005	mg/L	
o-Cresol	<0.005	mg/L	
p-Cresol	<0.005	mg/L	
1,4-Dichlorobenzene	<0.0044	mg/L	
1,2-Dichloroethane	<12	mg/L	
1,1-Dichloroethene	<6.0	mg/L	
2,4-D	<0.0001	mg/L	
2,4-Dinitrotoluene	<.0057	mg/L	
Endrin	<0.00001	mg/L	
Heptachlor	<0.00001	mg/L	
Hexachlorobenzene	<0.0019	mg/L	
Hexachlorobutadiene	<0.0009	mg/L	
Hexachloroethane	<0.0016	mg/L	
Lead	<0.3	mg/L	3010/7420
Lindane	<0.00001	mg/L	
Mercury	0.0050	mg/L	7470
Methoxychlor	<0.0006	mg/L	
Methyl Ethyl Ketone	<19	mg/L	
Nitrobenzene	<0.0019	mg/L	

TN:

AFDHL/EQ  
BROOKS AFB TX 78235-5501

PAGE 1 (Cont'd)

AIR FORCE  
OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AFB, TEXAS, 78235-5501

REPORT OF ANALYSIS

RASF SAMPLE NO: GT901340                      OFHL SAMPLE NO: 90068807

SAMPLE TYPE:        WASTE, HAZARDOUS/TOXIC/DISPOSAL

SITE IDENTIFIER: FACC174A                      DATE RECEIVED: 901109

DATE COLLECTED: 901107                      DATE REPORTED: 910204

SAMPLE SUBMITTED BY: 2nd Strategic Hosp./SGPR

---

RESULTS

---

<u>Test</u>	<u>Results</u>	<u>Units</u>	<u>EPA Method</u>
Pentachlorophenol	<.0036	mg/L	
Pyridine	<.0050	mg/L	
Selenium	<0.3	mg/L	3020/7740
Silver	<0.05	mg/L	3010/7740
Toxaphene	<0.001	mg/L	
Vinyl Chloride	<8.5	mg/L	
Trichloroethylene	<6.5	mg/L	
Tetrachloroethylene	<7.5	mg/L	
2,4,5-Trichlorophenol	<.0050	mg/L	
2,4,6-Trichlorophenol	<.0027	mg/L	
Silvex	<0.00005	mg/L	
Flash Point (closed cup)	<82.4	degrees F	1010
Corrosivity	SINC		1110
Hydrogen ion (pH)	6.5		1110
Cyanide (total)	<0.2		SM 846 SEC 8.3
Sulfides	10	mg/L	SM 846 SFC 8.3
Major components	SN		

SINC        : Sample is not corrosive.

SN            : See comment.

AIR FORCE  
OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AFB, TEXAS, 78235-5501

REPORT OF ANALYSIS

BASE SAMPLE NO: GT901340                      DEHL SAMPLE NO: 90068807  
SAMPLE TYPE:        WASTE, HAZARDOUS/TOXIC/DISPOSAL  
SITE IDENTIFIER: FACC174A                      DATE RECEIVED: 901109  
DATE COLLECTED: 901107                      DATE REPORTED: 910204  
SAMPLE SUBMITTED BY: 2nd Strategic Hosp./SGPR

---

RESULTS

---

<u>Test</u>	<u>Results</u>	<u>Units</u>	<u>EPA Method</u>
-------------	----------------	--------------	-------------------

Comments:

SAMPLE IS (TOP 20%) 23% TOLUENE, 20% METHYL ETHYL KETONE, 15% ETHYL BETA-ETHOXYPROPIONATE, 6% ISO-PROPANOL, 6% N-BUTYL ACETATE, 6% XYLENES, 4% METHYL ISOBUTYL KETONE, 3% N-BUTANOL, 3% METHYL CYCLOHEXANE, 3% CELLOSOLVE ACETATE, 2% WATER, 2% HEPTANE, 2% ETHYL BENZENE, 2% 2-HEPTANONE, 2% UNKNOWN ACETATE COMPOUND AND 1% ETHYL ACETATE. (MIDDLE 67%) 79% WATER, 8% METHYL ETHYL KETONE, 6% ISO-PROPANOL, 2% N-BUTANOL, 2% N-BUTYL ACETATE, 2% ETHYL BETA-ETHOXYPROPIONATE AND 1% CELLOSOLVE ACETATE. (BOTTOM 13%) 100% SOLID.

< - Signifies none detected and the detection limits.

Analyzed by: Datachem

Reviewed by:



Michael J. Wantland, TSgt, USAF  
NCDIC Occupational Chemistry Branch

AIR FORCE  
OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AFB, TEXAS, 78235-5501

REPORT OF ANALYSIS

BASE SAMPLE NO: GT901341      OEHL SAMPLE NO: 90068808  
SAMPLE TYPE:      WASTE, HAZARDOUS/TOXIC/DISPOSAL  
SITE IDENTIFIER: FAWA000A      DATE RECEIVED:    901109  
DATE COLLECTED:    901107      DATE REPORTED:    910131  
SAMPLE SUBMITTED BY: 2nd Strategic Hosp./SGPB

---

RESULTS

---

<u>Test</u>	<u>Results</u>	<u>Units</u>	<u>EPA Method</u>
Arsenic	<0.3	mg/L	3020/7069
Barium	0.5	mg/L	3010/7080
Cadmium	<0.05	mg/L	3010/7130
Chromium	7.4	mg/L	3010/7190
Lead	<0.3	mg/L	3010/7420
Mercury	0.0007	mg/L	7470
Selenium	<0.3	mg/L	3020/7740
Silver	<0.05	mg/L	3010/7760
Corrosivity	SINC		1110
Hydrogen ion (pH)	7		1110
Cyanide (total)	<0.2		SW 846 SEC 8.3
Sulfides	10	mg/L	SW 34A SEC 3.3
Flash Point (closed cup)	<82.4	degrees F	1010
Major components	SN		

SINC      : Sample is not corrosive.

SN        : See comment.

TO:

AIR FORCE  
OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AFB, TEXAS. 78235-5501

REPORT OF ANALYSIS

BASE SAMPLE NO: BT901341      DEHL SAMPLE NO: 90068808  
SAMPLE TYPE: WASTE, HAZARDOUS/TOXIC/DISPOSAL  
SITE IDENTIFIER: FAWA000A      DATE RECEIVED: 901109  
DATE COLLECTED: 901107      DATE REPORTED: 910131  
SAMPLE SUBMITTED BY: 2nd Strategic Hosp./SGPB

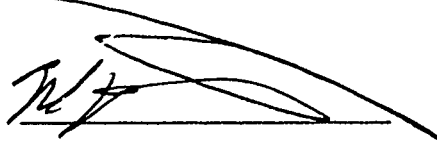
RESULTS

<u>Test</u>	<u>Results</u>	<u>Units</u>	<u>EPA Method</u>
-------------	----------------	--------------	-------------------

Comments:

SAMPLE IS (TOP 77%) 23% TOLUENE AND BUTYL ACETATE, 21% METHYL ETHYL KETONE, 16% UNIDENTIFIED ACETATES, 8% XYLENES, 6% PHTHALATES AND 5% UNIDENTIFIED HYDROCARBON, 4% C7-C11 HYDROCARBONS (ALKENES AND CYCLOALKANES), 3% ISOPROPANOL, 3% METHYLENE CHLORIDE, 3% ETHYL ACETATE, 2% 2-HEPTANE, 2% CELLOSOLVE ACETATE, 3% METHYL ISOBUTYL KETONE, 1% ISOBUTANOL AND 1% BUTANOL. (MIDDLE 10%) 100% PINK SOLIDS. (MIDDLE 8%) 80% WATER, 11% METHYL ETHYL KETONE, 7% C1-C4 ALCOHOLS, 1% UNIDENTIFIED ACETATES AND 1% TOLUENE. (BOTTOM 5%) 100% PINKISH AND SILVER COLORED SOLIDS, LOOKS LIKE PAINT WASTE.  
SGT ROBERT P. DAVIS/BARKSDALE AFB  
C - Signifies none detected and the detection limits.

Analyzed by: Datachem

Reviewed by: 

Michael J. Wantland, TSgt, USAF  
NCOIC Occupational Chemistry Branch

AIR FORCE  
OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AFB, TEXAS, 78235-5501

REPORT OF ANALYSIS

BASE SAMPLE NO: GT901342                      OEHL SAMPLE NO: 90068809  
SAMPLE TYPE:        WASTE, HAZARDOUS/TOXIC/DISPOSAL  
SITE IDENTIFIER: FAWA000A                      DATE RECEIVED: 901109  
DATE COLLECTED: 901107                      DATE REPORTED: 910204  
SAMPLE SUBMITTED BY: 2nd Strategic Hosp./SGPB

RESULTS

<u>Test</u>	<u>Results</u>	<u>Units</u>	<u>EPA Method</u>
Arsenic	<0.3	mg/L	3020/2060
Barium	<0.5	mg/L	3010/2080
Benzene	<8.0	mg/L	
Cadmium	<0.05	mg/L	3010/2130
Carbon Tetrachloride	<7.5	mg/L	
Chlordane	NP	mg/L	
Chlorobenzene	<6.5	mg/L	
Chloroform	<9.0	mg/L	
Chromium	<0.05	mg/L	3010/2190
m-Cresol	<.0050	mg/L	
o-Cresol	480.	mg/L	
p-Cresol	<.0050	mg/L	
1,4-Dichlorobenzene	<0.0044	mg/L	
1,2-Dichloroethane	<12	mg/L	
1,1-Dichloroethene	<6.0	mg/L	
2,4-D	<0.0001	mg/L	
2,4-Dinitrotoluene	<.0057	mg/L	
Endrin	NP	mg/L	
Heptachlor	NP	mg/L	
Hexachlorobenzene	<0.0019	mg/L	
Hexachlorobutadiene	<0.0009	mg/L	
Hexachloroethane	<0.0016	mg/L	
Lead	<0.3	mg/L	3010/2420
Lindane	NP	mg/L	
Mercury	0.0021	mg/L	7470
Methoxychlor	NP	mg/L	
Methyl Ethyl Ketone	6100	mg/L	
Nitrobenzene	<0.0019	mg/L	

TO:

AFOEHL/EQ  
BROOKS AFB TX 78235-5501

PAGE 1(Cont'd)

AIR FORCE  
OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AFB, TEXAS, 78235-5501

REPORT OF ANALYSIS

BASE SAMPLE NO: GT901342                      DEHL SAMPLE NO: 90068809  
SAMPLE TYPE:        WASTE, HAZARDOUS/TOXIC/DISPENSAL  
SITE IDENTIFIER: FAWA000A                      DATE RECEIVED: 901109  
DATE COLLECTED: 901107                      DATE REPORTED: 910204  
SAMPLE SUBMITTED BY: 2nd Strategic Hosp./SGPR

---

RESULTS

---

<u>Test</u>	<u>Results</u>	<u>Units</u>	<u>EPA Method</u>
Pentachlorophenol	<.0036	mg/L	
Pyridine	<.0050	mg/L	
Selenium	<0.3	mg/L	3020/7740
Silver	<0.05	mg/L	3010/7760
Toxaphene	NP	mg/L	
Vinyl Chloride	<8.5	mg/L	
Trichloroethylene	<6.5	mg/L	
Tetrachloroethylene	<7.5	mg/L	
2,4,5-Trichlorophenol	<.0050	mg/L	
2,4,6-Trichlorophenol	<.0027	mg/L	
Silvex	<0.00005	mg/L	
Flash Point (closed cup)	<82.4	degrees F	1010
Corrosivity	SINC		1110
Hydrogen ion (pH)	10.4		1110
Cyanide (total)	<0.2		SW 846 SEC 8.3
Sulfides	<10.0	mg/L	SW 846 SFC 8.3
Major components	SN		

NP        : Test Not Performed  
SINC      : Sample is not corrosive.  
SN        : See comment.

AIR FORCE  
OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AFB, TEXAS, 78235-5511

REPORT OF ANALYSIS

BASE SAMPLE NO: GT901342                      DEHL SAMPLE NO: 90068809  
SAMPLE TYPE:        WASTE, HAZARDOUS/TOXIC/DISPOSAL  
SITE IDENTIFIER: FAWA000A                      DATE RECEIVED: 901109  
DATE COLLECTED: 901107                      DATE REPORTED: 910204  
SAMPLE SUBMITTED BY: 2nd Strategic Hosp./SGPB

---

RESULTS

---

<u>Test</u>	<u>Results</u>	<u>Units</u>	<u>EPA Method</u>
-------------	----------------	--------------	-------------------

Comments:

SGT ROBERT P. DAVIS/BARKSDALE AFB  
SAMPLE IS (TOP 92%) 55% PHENOL, 20% METHYLENE CHLORIDE, 18% WATER AND  
7% UNKNOWN PHENOL COMPOUND. (BOTTOM 8%) 100% SOLID.  
< - Signifies none detected and the detection limits.

Analyzed by: Datachem

Reviewed by: 

Michael J. Wantland, TSgt, USAF  
NCOIC Occupational Chemistry Branch



AIR FORCE  
OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AFB, TEXAS, 78235-5501

REPORT OF ANALYSIS

BASE SAMPLE NO: GT901343                      OEHL SAMPLE NO: 90068810

SAMPLE TYPE:        WASTE, HAZARDOUS/TOXIC/DISPOSAL

SITE IDENTIFIER: FAWA000A                      DATE RECEIVED: 901109

DATE COLLECTED: 901108                      DATE REPORTED: 910204

SAMPLE SUBMITTED BY: 2nd Strategic Hosp./SGPB

---

RESULTS

---

<u>Test</u>	<u>Results</u>	<u>Units</u>	<u>EPA Method</u>
Arsenic	0.7	mg/L	3020/7060
Barium	4.2	mg/L	3010/7080
Benzene	<8.0	mg/L	
Cadmium	8.1	mg/L	3010/7130
Carbon Tetrachloride	<7.5	mg/L	
Chlordane	NP	mg/L	
Chlorobenzene	<6.5	mg/L	
Chloroform	<9.0	mg/L	
Chromium	340	mg/L	3010/7190
m-Cresol	<.0050	mg/L	
o-Cresol	6.4	mg/L	
p-Cresol	<.0050	mg/L	
1,4-Dichlorobenzene	<0.0044	mg/L	
1,2-Dichloroethane	<12	mg/L	
1,1-Dichloroethene	<6.0	mg/L	
2,4-D	<0.0001	mg/L	
2,4-Dinitrotoluene	<.0057	mg/L	
Endrin	NP	mg/L	
Heptachlor	NP	mg/L	
Hexachlorobenzene	<0.0019	mg/L	
Hexachlorobutadiene	<0.0009	mg/L	
Hexachloroethane	<0.0016	mg/L	
Lead	54.	mg/L	3010/7420
Lindane	NP	mg/L	
Mercury	0.0021	mg/L	7470
Methoxychlor	NP	mg/L	
Methyl Ethyl Ketone	<19	mg/L	
Nitrobenzene	<0.0019	mg/L	

TO:

AFOEHL/EQ  
BROOKS AFB TX 78235-5501

PAGE 1 (Cont'd)

AIR FORCE  
OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AFB, TEXAS, 78235-5501

REPORT OF ANALYSIS

BASE SAMPLE NO: GT901343                      OEHL SAMPLE NO: 90068810  
SAMPLE TYPE:        WASTE, HAZARDOUS/TOXIC/DISPOSAL  
SITE IDENTIFIER: FAMA000A                      DATE RECEIVED: 901109  
DATE COLLECTED: 901108                      DATE REPORTED: 910204  
SAMPLE SUBMITTED BY: 2nd Strategic Hosp./SGPR

RESULTS

<u>Test</u>	<u>Results</u>	<u>Units</u>	<u>EPA Method</u>
Pentachlorophenol	<.0036	mg/L	
Pyridine	<.0050	mg/L	
Selenium	<0.3	mg/L	3020/7740
Silver	0.07	mg/L	3010/7760
Toxaphene	NP	mg/L	
Vinyl Chloride	<8.5	mg/L	
Trichloroethylene	<6.5	mg/L	
Tetrachloroethylene	<7.5	mg/L	
2,4,5-Trichlorophenol	<.0050	mg/L	
2,4,6-Trichlorophenol	<.0027	mg/L	
Silvex	<0.00005	mg/L	
Flash Point (closed cup)	>140	degrees F	1010
Corrosivity	SINC		1110
Hydrogen ion (pH)	9.4		1110
Cyanide (total)	<0.2		SM 846 SFC 8.3
Sulfides	<10.0	mg/L	SM 846 SFC 8.3
Major components	SN		

NP        : Test Not Performed  
SINC     : Sample is not corrosive.  
SN       : See comment.

AIR FORCE  
OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AFB, TEXAS, 78235-5511

REPORT OF ANALYSIS

BASE SAMPLE NO: GT901343                      DEHL SAMPLE NO: 90068810  
SAMPLE TYPE:        WASTE, HAZARDOUS/TOXIC/DISPOSAL  
SITE IDENTIFIER: FAWA000A                      DATE RECEIVED: 901109  
DATE COLLECTED: 901108                      DATE REPORTED: 910204  
SAMPLE SUBMITTED BY: 2nd Strategic Hosp./SGPR

---

RESULTS

---

<u>Test</u>	<u>Results</u>	<u>Units</u>	<u>EPA Method</u>
-------------	----------------	--------------	-------------------

Comments:

SAMPLE IS 96% WATER AND 4% PHENOL.

< - Signifies none detected and the detection limits.

Analyzed by: Datachem

Reviewed by:



Michael J. Wantland, TSgt, USAF  
NCOIC Occupational Chemistry Branch

AIR FORCE  
OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AFB, TEXAS, 78235-5501

REPORT OF ANALYSIS

BAEF SAMPLE NO: 6T901344      NEHL SAMPLE NO: 90068811  
SAMPLE TYPE:      WASTE, HAZARDOUS/TOXIC/DISPOSAL  
SITE IDENTIFIER:      DATE RECEIVED: 901109  
DATE COLLECTED: 901107      DATE REPORTED: 910131  
SAMPLE SUBMITTED BY: 2nd Strategic Hosp. 3GPA

RESULTS

<u>Test</u>	<u>Results</u>	<u>Units</u>	<u>EPA Method</u>
Arsenic	NP	mg/L	3020/7060
Barium	NP	mg/L	3010/7030
Cadmium	NP	mg/L	3010/7130
Chromium	NP	mg/L	3010/7190
Lead	NP	mg/L	3010/7420
Mercury	NP	mg/L	7470
Selenium	NP	mg/L	3020/7740
Silver	NP	mg/L	3010/7760
Corrosivity	NP		1110
Hydrogen ion (pH)	NP		1110
Cyanide (total)	NP		SW 846 SFC 8.3
Sulfides	NP	mg/L	SW 846 SFC 8.3
Flash Point (closed cup)	<82.4	degrees F	1010
Major components	SN		

NP : Test Not Performed

SN : See comment.

Comments:

SAMPLE IS 56% DICHLOROBENZENE, 29% CRESOL, 4% O4-O5 BENZENES, 3% WATER, 3% PHENOL, 3% CHLOROBENZENE, 1% NAPHTHALENE AND 1% HYDROCARBON (>C20 ALKANE).      SGT ROBERT P. DAUIS/BARKSDALE AFB

TO:

AFDEHL/ED  
BROOKS AFB TX 78235-5501

PAGE 1 (Cont'd)

AIR FORCE  
OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AFB, TEXAS, 78235-5501

REPORT OF ANALYSIS

BASE SAMPLE NO: GT901344      OEHL SAMPLE NO: 90068811  
SAMPLE TYPE:      WASTE, HAZARDOUS/TOXIC/DISPOSAL  
SITE IDENTIFIER:      DATE RECEIVED: 901119  
DATE COLLECTED: 901107      DATE REPORTED: 910131  
SAMPLE SUBMITTED BY: 2nd Strategic Hosp. -SGPB


---

RESULTS

---

<u>Test</u>	<u>Results</u>	<u>Units</u>	<u>EPA Method</u>
-------------	----------------	--------------	-------------------

Analyzed by: Datachem

Reviewed by: 

Michael J. Wantland, TSgt, USAF  
NCOIC Occupational Chemistry Branch

PAGE 2

AIR FORCE  
OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AFB, TEXAS, 78235-5501

REPORT OF ANALYSIS

BASE SAMPLE NO: GT901345                      DEHL SAMPLE NO: 90068812  
SAMPLE TYPE:            WASTE, HAZARDOUS/TOXIC/DISPOSAL  
SITE IDENTIFIER:                                      DATE RECEIVED: 901109  
DATE COLLECTED: 901107                              DATE REPORTED: 910130  
SAMPLE SUBMITTED BY: 2nd Strategic Hosp./SGPB

RESULTS

<u>Test</u>	<u>Results</u>	<u>Units</u>	<u>EPA Method</u>
Corrosivity	SINC		1110
Flash Point (closed cup)	132.4	degrees F	1010
Mercury	0.015	mg/L	7470
Hydrogen ion (pH)	10.3		1110
Cyanide (total)	<0.2		SW 846 SEC 8.3
Sulfides	<10.0	mg/L	SW 846 SEC 3.3
Arsenic	SN	mg/L	3020/7060
Barium	SN	mg/L	3010/7080
Cadmium	SN	mg/L	3010/7130
Chromium	SN	mg/L	3010/7190
Lead	SN	mg/L	3010/7420
Selenium	SN	mg/L	3020/7740
Silver	SN	mg/L	3010/7760
Major components	SN		

SINC : Sample is not corrosive.

SN : See comment.

TQ:

AIR FORCE  
OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AFB, TEXAS, 78235-5501

REPORT OF ANALYSIS

BASE SAMPLE NO: GT901345                      DEHL SAMPLE NO: 90068812  
SAMPLE TYPE:            WASTE, HAZARDOUS/TOXIC/DISPOSAL  
SITE IDENTIFIER:                                      DATE RECEIVED: 901109  
DATE COLLECTED: 901107                      DATE REPORTED: 910130  
SAMPLE SUBMITTED BY: 2nd Strategic Hosp./SGPB

---

RESULTS

---

<u>Test</u>	<u>Results</u>	<u>Units</u>	<u>EPA Method</u>
-------------	----------------	--------------	-------------------

Comments:

THE SAMPLES EXPLODED DURING DIGESTION, THEY WERE NOT STARTED AGAIN BECAUSE OF INSUFFICIENT VOLUME.  
SAMPLE IS (TOP 49%) 93% C17-C32 HYDROCARBONS (ALKANES AND CYCLOALKANES), 6% C9-C11 HYDROCARBONS (ALKANES AND CYCLOALKANES) AND 1% 4-METHYL-2-PENTANOL. (BOTTOM 51%) 75% C16-C32 HYDROCARBONS, 13% WATER, 7% C9-C11 HYDROCARBONS, 4% 4-METHYL-2-PENTANOL AND 1% ALPHA AMINO ISO-BUTANOIC ACID.                      SGT ROBERT P. DAVIS/BARKLEY AFB  
< - Signifies none detected and the detection limits.

Analyzed by: Datachem

Reviewed by: 

Michael J. Wantland, TSgt, USAF  
NCOIC Occupational Chemistry Branch

AIR FORCE  
OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AFB, TEXAS, 78235-5511

REPORT OF ANALYSIS

BASE SAMPLE NO: GT901346      DEHL SAMPLE NO: 90048613  
SAMPLE TYPE: WASTE, HAZARDOUS/TOXIC/DISPOSAL  
SITE IDENTIFIER:      DATE RECEIVED: 901109  
DATE COLLECTED: 901107      DATE REPORTED: 910131  
SAMPLE SUBMITTED BY: 2nd Strategic Hosp., SGPE

RESULTS

<u>Test</u>	<u>Results</u>	<u>Units</u>	<u>EPA Method</u>
Arsenic	NP	mg/L	3020.7060
Barium	NP	mg/L	3010.7090
Cadmium	NP	mg/L	3010.7130
Chromium	NP	mg/L	3010.7190
Lead	NP	mg/L	3010.7400
Mercury	NP	mg/L	7470
Selenium	NP	mg/L	3020.7740
Silver	NP	mg/L	3010.7750
Corrosivity	NP		1110
Hydrogen Ion (pH)	NP		1110
Cyanide (Total)	NP		SM 846 SEC 8.3
Sulfides	NP	mg/L	SM 846 SEC 8.3
Flash Point (closed cup)	<82.4	degrees F	1010
Major components	SN		

NP : Test Not Performed

SN : See comment.

Comments:

SAMPLE IS 88% C10-C13 HYDROCARBONS (ALKANES, CYCLOALKANES, AND AROMATICS) AND 12% MIXED ESTERS OF NEOPENTYL POLYOLS.  
SGT ROBERT P. DAVIS/BARKSDALE AFB

TO:



AIR FORCE  
OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AFB, TEXAS, 78235-5501

REPORT OF ANALYSIS

BASE SAMPLE NO: GT901346      OEHL SAMPLE NO: 90068813  
SAMPLE TYPE: WASTE, HAZARDOUS/TOXIC/DISPOSAL  
SITE IDENTIFIER:      DATE RECEIVED: 901109  
DATE COLLECTED: 901107      DATE REPORTED: 910131  
SAMPLE SUBMITTED BY: 2nd Strategic Hosp./SGPB

---

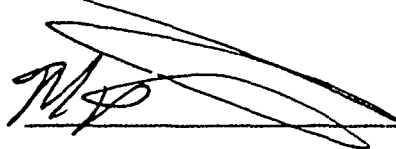
RESULTS

---

<u>Test</u>	<u>Results</u>	<u>Units</u>	<u>EPA Method</u>
-------------	----------------	--------------	-------------------

Analyzed by: Datachem

Reviewed by:



Michael J. Wantland, TSgt, USAF  
NORIC Occupational Chemistry Branch

PAGE 2

AIR FORCE  
OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AFB, TEXAS, 78235-5501

REPORT OF ANALYSIS

BASE SAMPLE NO: GT901347      OEHL SAMPLE NO: 90068814  
SAMPLE TYPE:      WASTE, HAZARDOUS/TOXIC/DISPOSAL  
SITE IDENTIFIER: NXXX0000A      DATE RECEIVED: 901109  
DATE COLLECTED: 901107      DATE REPORTED: 910131  
SAMPLE SUBMITTED BY: 2nd Strategic Hosp./SGPB

RESULTS

<u>Test</u>	<u>Results</u>	<u>Units</u>	<u>EPA Method</u>
Arsenic	<0.3	mg/L	3020/7060
Barium	<0.5	mg/L	3010/7080
Cadmium	<0.05	mg/L	3010/7130
Chromium	10	mg/L	3010/7190
Lead	<0.3	mg/L	3010/7420
Mercury	0.0006	mg/L	7470
Selenium	<0.3	mg/L	3020/7740
Silver	<0.05	mg/L	3010/7760
Corrosivity	SINC		1110
Hydrogen ion (pH)	5.9		1110
Cyanide (total)	NP		SW 846 SEC 8.3
Sulfides	NP	mg/L	SW 846 SEC 8.3
Flash Point (closed cup)	<82.4	degrees F	1010
Major components	SN		

SINC : Sample is not corrosive.

NP : Test Not Performed

SN : See comment.

TO:

AIR FORCE  
OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AFB, TEXAS, 78235-5501

REPORT OF ANALYSIS

RASE SAMPLE NO: GT901347      OEHL SAMPLE NO: 90068614  
SAMPLE TYPE: WASTE, HAZARDOUS/TOXIC/DISPOSAL  
SITE IDENTIFIER: KXXX000A      DATE RECEIVED: 901109  
DATE COLLECTED: 901107      DATE REPORTED: 910131  
SAMPLE SUBMITTED BY: 2nd Strategic Hosp./SGPB

RESULTS

<u>Test</u>	<u>Results</u>	<u>Units</u>	<u>EPA Method</u>
-------------	----------------	--------------	-------------------

Comments:

SAMPLE IS (TOP 95%) 31% UNIDENTIFIED ACETATES, 24% METHYL ETHYL KETONE, 13% TOLUENE, 9% BUTYL ACETATE, 8% XYLENES, 5% ETHYL ACETATE, 3% OCTANE, 2% ISOPROPANOL, 2% METHYL ISOBUTYL KETONE AND 1% ACETON BUTENE. (BOTTOM 5%) 100% DARK BLUE AND GREY SILVER PARTICLES, MAY BE PAINT CHIPS.


SGT ROBERT E.

DAVIS/BARKSDALE AFB

< - Signifies none detected and the detection limits.

Analyzed by: Datachem

Reviewed by:

  
Michael J. Mantland, TSgt, USAF  
NCOIC Occupational Chemistry Branch

AIR FORCE  
OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AFB, TEXAS, 78235-5501

REPORT OF ANALYSIS

BASE SAMPLE NO: GT901348      DEHL SAMPLE NO: 90068815  
SAMPLE TYPE:      WASTE, HAZARDOUS/TOXIC/DISPOSAL  
SITE IDENTIFIER: XXXX000A      DATE RECEIVED: 901109  
DATE COLLECTED: 901107      DATE REPORTED: 910131  
SAMPLE SUBMITTED BY: 2nd Strategic Hosp./SGPB

RESULTS

<u>Test</u>	<u>Results</u>	<u>Units</u>	<u>EPA Method</u>
Arsenic	<0.3	mg/l	3020/2060
Barium	<0.5	mg/L	3010/2030
Cadmium	<0.05	mg/l	3010/2130
Chromium	1.2	mg/L	3010/2190
Lead	<0.3	mg/L	3010/2420
Mercury	<0.0002	mg/L	7470
Selenium	<0.3	mg/L	3020/2240
Silver	<0.05	mg/L	3010/2260
Flash Point (closed cup)	<140	degrees F	1010
Corrosivity	SINC		1110
Hydrogen ion (pH)	7.9		1110
Cyanide (total)	<0.2		SW 846 SEC 8.3
Sulfides	<10.0	mg/L	SW 846 SEC 8.3
Major components	SN		

SINC : Sample is not corrosive.

SN : See comment.

Comments:

SAMPLE IS 100% WATER.

SGT ROBERT P. DAVIS/BARKSDALE AFB

< - Signifies none detected and the detection limits.

TO:

AIR FORCE  
OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AFB, TEXAS, 78235-5501

REPORT OF ANALYSIS

BASE SAMPLE NO: GT901348      OEHL SAMPLE NO: 90063815  
SAMPLE TYPE:      WASTE, HAZARDOUS/TOXIC/DISPOSAL  
SITE IDENTIFIER: XXXX000A      DATE RECEIVED: 901109  
DATE COLLECTED: 901107      DATE REPORTED: 910131  
SAMPLE SUBMITTED BY: 2nd Strategic Hosp. -SGPS

---

RESULTS

---

<u>Test</u>	<u>Results</u>	<u>Units</u>	<u>EPA Method</u>
-------------	----------------	--------------	-------------------

Analyzed by: Datachem

Reviewed by: 

Michael J. Mantland, TSgt, USAF  
NCOIC Occupational Chemistry Branch

PAGE 2

AIR FORCE  
OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AFB, TEXAS, 78235-5501

REPORT OF ANALYSIS

BASE SAMPLE NO: 60901349      DEHL SAMPLE NO: 90068816  
SAMPLE TYPE:      RESIDUE/ASH  
SITE IDENTIFIER: XXXX000A      DATE RECEIVED: 901109  
DATE COLLECTED: 901107      DATE REPORTED: 910131  
SAMPLE SUBMITTED BY: 2nd Strategic Hosp. SGPB

RESULTS

<u>Test</u>	<u>Results</u>	<u>Units</u>	<u>EPA Method</u>
Arsenic	<0.3	mg/L	3020/7060
Barium	0.9	mg/L	3010/7080
Cadmium	9.9	mg/L	3010/7130
Chromium	22.	mg/L	3010/7190
Lead	<0.3	mg/L	3010/7420
Mercury	<0.0002	mg/L	7470
Selenium	<0.3	mg/L	3020/7740
Silver	<0.05	mg/L	3010/7760

Comments:

SGT ROBERT P. DAVIS/BARKSDALE AFB

< - Signifies none detected and the detection limits.

Analyzed by: Datachem

Reviewed by: 

Michael J. Wantland, TSgt, USAF  
NCOIC Occupational Chemistry Branch

TO:

AFOFHL/EO  
BROOKS AFB TX 78235-5501

PAGE 1

AIR FORCE  
OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AFB, TEXAS, 78235-5501

REPORT OF ANALYSIS

BASE SAMPLE NO: GD901350                      OEHL SAMPLE NO: 90069457  
SAMPLE TYPE:        RESIDUE/ASH  
SITE IDENTIFIER: XXXX000A                      DATE RECEIVED: 901114  
DATE COLLECTED: 901107                      DATE REPORTED: 910201  
SAMPLE SUBMITTED BY: 2nd Strategic Hosp./SGPB

2 FMS                      PAINT Shop

RESULTS

<u>Test</u>	<u>Results</u>	<u>Units</u>	<u>EPA Method</u>
Arsenic	<0.3	mg/L	3020/7060
Barium	1.2	mg/L	3010/7080
Cadmium	72.	mg/L	3010/7130
Chromium	4.2	mg/L	3010/7190
Lead	<0.3	mg/L	3010/7420
Mercury	<0.0002	mg/L	7470
Selenium	<0.3	mg/L	3020/7740
Silver	<0.05	mg/L	3010/7760

Comments:

SGT ROBERT P. DAVIS/BARKSDALE AFB  
< - Signifies none detected and the detection limits.

Analyzed by: Datachem

Reviewed by: 

Michael J. Wantland, TSgt, USAF  
NCOIC Occupational Chemistry Branch

TO:

AFOEHL/EQ  
BROOKS AFB TX 78235-5501

PAGE 1

AIR FORCE  
OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AFB, TEXAS, 78235-5501

REPORT OF ANALYSIS

BASE SAMPLE NO: GT901351                      OEHL SAMPLE NO: 90068818  
SAMPLE TYPE:        WASTE, HAZARDOUS/TOXIC/DISPOSAL  
SITE IDENTIFIER: FANXXXX                      DATE RECEIVED: 901109  
DATE COLLECTED: 901108                      DATE REPORTED: 910204  
SAMPLE SUBMITTED BY: 2nd Strategic Hosp./SGPB

RESULTS

<u>Test</u>	<u>Results</u>	<u>Units</u>	<u>EPA Method</u>
Toxaphene	NP	mg/L	
Arsenic	2.5	mg/L	3020/2060
Barium	<0.5	mg/L	3010/2080
Benzene	<8.0	mg/L	
Cadmium	<0.05	mg/L	3010/2130
Carbon Tetrachloride	<7.5	mg/L	
Chlordane	NP	mg/L	
Chlorobenzene	<6.5	mg/L	
Chloroform	<9.0	mg/L	
Chromium	0.29	mg/L	3010/2190
m-Cresol	<.0050	mg/L	
o-Cresol	<.0050	mg/L	
p-Cresol	<.0050	mg/L	
1,4-Dichlorobenzene	<0.0044	mg/L	
1,2-Dichloroethane	<12	mg/L	
1,1-Dichloroethene	<6.0	mg/L	
2,4-D	<0.0001	mg/L	
2,4-Dinitrotoluene	<.0057	mg/L	
Endrin	NP	mg/L	
Heptachlor	NP	mg/L	
Hexachlorobenzene	<0.0019	mg/L	
Hexachlorobutadiene	<0.0009	mg/L	
Hexachloroethane	<0.0016	mg/L	
Lead	<3.0	mg/L	3010/2420
Lindane	NP	mg/L	
Mercury	<0.0005	mg/L	7470
Methoxychlor	NP	mg/L	
Methyl Ethyl Ketone	<19	mg/L	

TD:

AFOEHL/EQ  
BROOKS AFB TX 78235-5501

PAGE 1 (Cont'd)



AIR FORCE  
OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AFB, TEXAS, 78235-5501

REPORT OF ANALYSIS

BASE SAMPLE NO: GT901351                      DFHL SAMPLE NO: 90068818  
SAMPLE TYPE:        WASTE, HAZARDOUS/TOXIC/DISPOSAL  
SITE IDENTIFIER: FANDXXXX                      DATE RECEIVED: 901109  
DATE COLLECTED: 901108                      DATE REPORTED: 910204  
SAMPLE SUBMITTED BY: 2nd Strategic Hnsp./SGPB

---

RESULTS

---

<u>Test</u>	<u>Results</u>	<u>Units</u>	<u>FPA Method</u>
Nitrobenzene	<0.0019	mg/L	
Pentachlorophenol	<.0036	mg/L	
Pyridine	<.0050	mg/L	
Selenium	<3.0	mg/L	3020/2740
Silver	0.08	mg/L	3010/2760
Vinyl Chloride	<8.5	mg/L	
Trichloroethylene	<6.5	mg/L	
Tetrachloroethylene	<7.5	mg/L	
2,4,5-Trichlorophenol	<.0050	mg/L	
2,4,6-Trichlorophenol	<.0027	mg/L	
Silvex	<0.00005	mg/L	
Flash Point (closed cup)	>140	degrees F	1010
Corrosivity	SINC		1110
Hydrogen ion (pH)	8.1		1110
Cyanide (total)	<0.2		SW 846 SFC 8.3
Sulfides	<10.0	mg/L	SW 846 SFC 8.3
Major components	SN		

NP        : Test Not Performed  
SN        : See comment.  
SINC      : Sample is not corrosive.

AIR FORCE  
OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AFB, TEXAS, 78235-5501

REPORT OF ANALYSIS

BASE SAMPLE NO: GT901351      OEHL SAMPLE NO: 90068818  
SAMPLE TYPE:      WASTE, HAZARDOUS/TOXIC/DISPOSAL  
SITE IDENTIFIER: FANDXXXX      DATE RECEIVED: 901109  
DATE COLLECTED: 901108      DATE REPORTED: 910204  
SAMPLE SUBMITTED BY: 2nd Strategic Hosp./SGPB

---

RESULTS

---

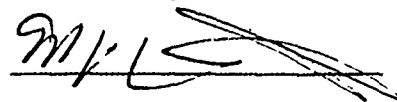
<u>Test</u>	<u>Results</u>	<u>Units</u>	<u>EPA Method</u>
-------------	----------------	--------------	-------------------

Comments:

PER MSGT. VAUGHN AND CONCURRENCE BY LT. MCLARIN (EHE) CHANGE TCLP  
METAL TO FULL TCLP.  
SAMPLE IS 60% ETHYLENE GLYCOL, 26% HIGH MOLECULAR WEIGHT ALCOHOLS AND  
14% WATER.  
< - Signifies none detected and the detection limits.

Analyzed by: Datachem

Reviewed by:



Michael J. Wantland, TSgt, USAF  
NCOIC Occupational Chemistry Branch

AIR FORCE  
OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AFB, TEXAS, 78235-5501

REPORT OF ANALYSIS

BASE SAMPLE NO: GT901352                      DFHL SAMPLE NO: 90068819  
SAMPLE TYPE:        WASTE, HAZARDOUS/TOXIC/DISPOSAL  
SITE IDENTIFIER: FANDXXXX                      DATE RECEIVED: 901109  
DATE COLLECTED: 901108                      DATE REPORTED: 910204  
SAMPLE SUBMITTED BY: 2nd Strategic Hosp./SGPB

RESULTS

<u>Test</u>	<u>Results</u>	<u>Units</u>	<u>EPA Method</u>
Silver	NP	mg/L	3010/2720
Arsenic	NP	mg/L	3020/2060
Barium	NP	mg/L	3010/2080
Benzene	<8.0	ug/L	
Cadmium	NP	mg/L	3010/2130
Carbon Tetrachloride	<7.5	mg/L	
Chlordane	NP	mg/L	
Chlorobenzene	<6.5	mg/L	
Chloroform	<9.0	mg/L	
Chromium	NP	mg/L	3010/2190
m-Cresol	<.0050	mg/L	
o-Cresol	<.0050	mg/L	
p-Cresol	<.0050	mg/L	
1,4-Dichlorobenzene	<0.0044	mg/L	
1,2-Dichloroethane	<12	mg/L	
1,1-Dichloroethene	<6.0	mg/L	
2,4-D	NP	mg/L	
2,4-Dinitrotoluene	<.0057	mg/L	
Endrin	NP	mg/L	
Heptachlor	NP	mg/L	
Hexachlorobenzene	<0.0019	mg/L	
Hexachlorobutadiene	<0.0009	mg/L	
Hexachloroethane	<0.0016	mg/L	
Lead	NP	mg/L	3010/2420
Lindane	NP	mg/L	
Mercury	NP	mg/L	7470
Methoxychlor	NP	mg/L	
Methyl Ethyl Ketone	30.	mg/L	

TD:

AFDEHL/EQ  
BROOKS AFB TX 78235-5501

PAGE 1 (Cont'd)

AIR FORCE  
OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AFB, TEXAS, 78235-5501

REPORT OF ANALYSIS

BASE SAMPLE NO: GT901352                      DFHL SAMPLE NO: 90068819  
SAMPLE TYPE:            WASTE, HAZARDOUS/TOXIC/DISPOSAL  
SITE IDENTIFIER: FANXXXX                      DATE RECEIVED: 901109  
DATE COLLECTED: 901108                      DATE REPORTED: 910204  
SAMPLE SUBMITTED BY: 2nd Strategic Hosp./SHPB

RESULTS

<u>Test</u>	<u>Results</u>	<u>Units</u>	<u>EPA Method</u>
Nitrobenzene	<0.0019	mg/L	
Pentachlorophenol	<.0036	mg/L	
Pyridine	<.0050	mg/L	
Selenium	NP	mg/L	3020/7740
Toxaphene	NP	mg/L	
Vinyl Chloride	<8.5	mg/L	
Trichloroethylene	<6.5	mg/L	
Tetrachloroethylene	<2.5	mg/L	
2,4,5-Trichlorophenol	<.0050	mg/L	
2,4,6-Trichlorophenol	<.0027	mg/L	
Silvex	NP	mg/L	
Flash Point (closed cup)	<82.4	degrees F	1010
Corrosivity	NP		1110
Hydrogen ion (pH)	NP		1110
Cyanide (total)	NP		SW 846 SFC 8.3
Sulfides	NP	mg/L	SW 846 SFC 8.3
Major components	SN		

NP            : Test Not Performed

SN            : See comment.

AIR FORCE  
OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AFB, TEXAS, 78235-5511

REPORT OF ANALYSIS

BASE SAMPLE NO: GT9011352 DEHL SAMPLE ID: 90068819  
SAMPLE TYPE: WASTE, HAZARDOUS/TOXIC/DISPOSAL  
SITE IDENTIFIER: FANDXXXX DATE RECEIVED: 901109  
DATE COLLECTED: 901108 DATE REPORTED: 910204  
SAMPLE SUBMITTED BY: 2nd Strategic Hosp./SIGPR

RESULTS

<u>Test</u>	<u>Results</u>	<u>Units</u>	<u>EPA Method</u>
-------------	----------------	--------------	-------------------

Comments:

PER MSGT. VAUGHN AND CONCURRENCE BY LT. MCLARIN (EHE) CHANGE TOLP  
METAL TO FULL TOLP.  
SAMPLE IS 59% PHTHALATES, 23% C2-C5 DECALINS AND 18% 2-ETHYL HEXYL  
DIPHENYL PHOSPHATE.  
< - Signifies none detected and the detection limits.

Analyzed by: Datachem

Reviewed by:



Michael J. Wantland, TSgt, USAF  
NDDIC Occupational Chemistry Branch

AIR FORCE  
OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AFB, TEXAS, 78235-5501

REPORT OF ANALYSIS

BASE SAMPLE NO: GT901353                      OEHL SAMPLE NO: 90068820  
SAMPLE TYPE:        WASTE, HAZARDOUS/TOXIC/DISPOSAL  
SITE IDENTIFIER: FANDXXXX                      DATE RECEIVED: 901109  
DATE COLLECTED: 901108                      DATE REPORTED: 910204  
SAMPLE SUBMITTED BY: 2nd Strategic Hosp./SRPB

RESULTS

<u>Test</u>	<u>Results</u>	<u>Units</u>	<u>EPA Method</u>
1,2-Dichloroethane	<12	mg/L	
Arsenic	<3.0	mg/L	3020/7060
Barium	<0.5	mg/L	3010/7080
Benzene	<8.0	mg/L	
Cadmium	<0.05	mg/L	3010/7130
Carbon Tetrachloride	<7.5	mg/L	
Chlordane	<0.0003	mg/L	
Chlorobenzene	<6.5	mg/L	
Chloroform	<9.0	mg/L	
Chromium	54.	mg/L	3010/7190
m-Cresol	<.0050	mg/L	
o-Cresol	<.0050	mg/L	
p-Cresol	<.0050	mg/L	
1,4-Dichlorobenzene	<0.0044	mg/L	
1,1-Dichloroethene	<6.0	mg/L	
2,4-D	<0.0001	mg/L	
2,4-Dinitrotoluene	<.0057	mg/L	
Endrin	<0.00001	mg/L	
Heptachlor	<0.00001	mg/L	
Hexachlorobenzene	<0.0019	mg/L	
Hexachlorobutadiene	<0.0009	mg/L	
Hexachloroethane	<0.0016	mg/L	
Lead	<3.0	mg/L	3010/7420
Lindane	<0.00001	mg/L	
Mercury	<0.0005	mg/L	7470
Methoxychlor	<0.006	mg/L	
Methyl Ethyl Ketone	<19	mg/L	
Nitrobenzene	<0.0019	mg/L	

TO:

AFOEHL/EQ  
BROOKS AFB TX 78235-5501

PAGE 1 (Cont'd)

AIR FORCE  
OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AFB, TEXAS, 78235-5501

REPORT OF ANALYSIS

BASE SAMPLE NO: GT901353                      DFHL SAMPLE NO: 90068820  
SAMPLE TYPE:        WASTE, HAZARDOUS/TOXIC/DISPOSAL  
SITE IDENTIFIER: FANXXXX                      DATE RECEIVED: 901109  
DATE COLLECTED: 901108                      DATE REPORTED: 910204  
SAMPLE SUBMITTED BY: 2nd Strategic Hosp./SGPB

---

RESULTS

---

<u>Test</u>	<u>Results</u>	<u>Units</u>	<u>EPA Method</u>
Pentachlorophenol	<.0036	mg/L	
Pyridine	<.0050	mg/L	
Selenium	<3.0	mg/L	3020/7740
Silver	<0.05	mg/L	3010/7760
Toxaphene	<0.001	mg/L	
Vinyl Chloride	<8.5	mg/L	
Trichloroethylene	<6.5	mg/L	
Tetrachloroethylene	<7.5	mg/L	
2,4,5-Trichlorophenol	<.0050	mg/L	
2,4,6-Trichlorophenol	<.0027	mg/L	
Silvex	<0.00005	mg/L	
Flash Point (closed cup)	>140	degrees F	1010
Corrosivity	SINC		1110
Hydrogen ion (pH)	8.0		1110
Cyanide (total)	<0.2		SM 846 SEC 8.3
Sulfides	<10.0	mg/L	SM 846 SEC 8.3
Major components	SN		

SN        : See comment.

SINC      : Sample is not corrosive.

AIR FORCE  
OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AFB, TEXAS, 78235-5501

REPORT OF ANALYSIS

BASE SAMPLE NO: GT901353                      DEHL SAMPLE NO: 90068820  
SAMPLE TYPE:        WASTE, HAZARDOUS/TOXIC/DISPOSAL  
SITE IDENTIFIER: FANXXXX                      DATE RECEIVED: 901109  
DATE COLLECTED: 901108                      DATE REPORTED: 910204  
SAMPLE SUBMITTED BY: 2nd Strategic Hosp./SGPB

---

RESULTS

---

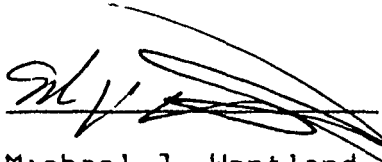
<u>Test</u>	<u>Results</u>	<u>Units</u>	<u>EPA Method</u>
-------------	----------------	--------------	-------------------

Comments:

PER MSGT. VAUGHN AND CONCURRENCE BY LT. MOLARIN (EQF) CHANGE TCLP  
METAL TO FULL TCLP.  
SAMPLE IS 99% WATER AND 1% TRACES OF BENZOIC ACID, TRIPHENYL  
PHOSPHINE OXIDE, AND 3,3'-DICHLORODIPHENYL SULPHONE WERE DETECTED.  
< - Signifies none detected and the detection limits.

Analyzed by: Datachem

Reviewed by:

  
Michael J. Wantland, MSgt, USAF  
NCOIC Occupational Chemistry Branch

PAGE 3



AIR FORCE  
OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AFB, TEXAS, 78235-5501

REPORT OF ANALYSIS

BASE SAMPLE NO: RT901354                      OEHL SAMPLE NO: 90068821  
SAMPLE TYPE:        WASTE, HAZARDOUS/TOXIC/DISPOSAL  
SITE IDENTIFIER: FANXXXX                      DATE RECEIVED: 901109  
DATE COLLECTED: 901108                      DATE REPORTED: 910204  
SAMPLE SUBMITTED BY: 2nd Strategic Hosp./SIRPB

RESULTS

<u>Test</u>	<u>Results</u>	<u>Units</u>	<u>EPA Method</u>
Heptachlor	NP	mg/L	
Arsenic	NP	mg/L	3020/7060
Barium	NP	mg/L	3010/7080
Benzene	<8.0	ug/L	
Cadmium	NP	mg/L	3010/7130
Carbon Tetrachloride	<7.5	mg/L	
Chlordane	NP	mg/L	
Chlorobenzene	<6.5	mg/L	
Chloroform	<9.0	mg/L	
Chromium	NP	mg/L	3010/7190
m-Cresol	<.0050	mg/L	
o-Cresol	<.0050	mg/L	
p-Cresol	<.0050	mg/L	
1,4-Dichlorobenzene	<0.0044	mg/L	
1,2-Dichloroethane	<12	mg/L	
1,1-Dichloroethene	4800.	mg/L	
2,4-D	NP	mg/L	
2,4-Dinitrotoluene	<.0057	mg/L	
Endrin	NP	mg/L	
Hexachlorobenzene	<0.0019	mg/L	
Hexachlorobutadiene	<0.0009	mg/L	
Hexachloroethane	<0.0016	mg/L	
Lead	NP	mg/L	3010/7420
Lindane	NP	mg/L	
Mercury	NP	mg/L	7470
Methoxychlor	NP	mg/L	
Methyl Ethyl Ketone	<19	mg/L	
Nitrobenzene	<0.0019	mg/L	

TO:

AFDEHL/EQ  
BROOKS AFB TX 78235-5501

PAGE 1 (Cont'd)

AIR FORCE  
OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AFB, TEXAS, 78235-5501

REPORT OF ANALYSIS

BASE SAMPLE NO: GT901354                      OEHL SAMPLE NO: 90068821  
SAMPLE TYPE:        WASTE, HAZARDOUS/TOXIC/DISPOSAL  
SITE IDENTIFIER: FANXXXX                      DATE RECEIVED: 901109  
DATE COLLECTED: 901108                      DATE REPORTED: 910204  
SAMPLE SUBMITTED BY: 2nd Strategic Hosp./SGPB

---

RESULTS

---

<u>Test</u>	<u>Results</u>	<u>Units</u>	<u>EPA Method</u>
Pentachlorophenol	<.0036	mg/L	
Pyridine	<.0050	mg/L	
Selenium	NP	mg/L	3020/7740
Silver	NP	mg/L	3010/7760
Toxaphene	NP	mg/L	
Vinyl Chloride	<8.5	mg/L	
Trichloroethylene	<6.5	mg/L	
Tetrachloroethylene	<7.5	mg/L	
2,4,5-Trichlorophenol	<.0050	mg/L	
2,4,6-Trichlorophenol	<.0027	mg/L	
Silvex	NP	mg/L	
Flash Point (closed cup)	<82.4	degrees F	1010
Corrosivity	SINC		1110
Hydrogen ion (pH)	8.2		1110
Cyanide (total)	NP		SW 846 SFC 8.3
Sulfides	NP	mg/L	SW 846 SFC 8.3
Major components	SN		

SN        : See comment.

NP        : Test Not Performed

SINC      : Sample is not corrosive.

AIR FORCE  
OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AFB, TEXAS, 78235-5501

REPORT OF ANALYSIS

BASE SAMPLE NO: GT901354 DEHL SAMPLE NO: 90068821  
SAMPLE TYPE: WASTE, HAZARDOUS/TOXIC/DISPOSAL  
SITE IDENTIFIER: FANXXXXX DATE RECEIVED: 901109  
DATE COLLECTED: 901108 DATE REPORTED: 910204  
SAMPLE SUBMITTED BY: 2nd Strategic Hosp./SGPB

RESULTS

<u>Test</u>	<u>Results</u>	<u>Units</u>	<u>EPA Method</u>
-------------	----------------	--------------	-------------------

Comments:

PER MSGT. VAUGHN AND CONCURRENCE BY LT. MOLARIN (EQE) CHANGE TCLP  
METAL TO FULL TCLP.  
SAMPLE IS (TOP 9%) 88% ETHYLENE GLYCOL, 6% 1,1,1-TRICHLOROETHANE, 4%  
WATER AND 2% DIOXANE. (BOTTOM 91%) 51% 1,1,1-TRICHLOROETHANE, 43%  
C12-C17 HYDROCARBONS AND 6% DIOXANE.  
< - Signifies none detected and the detection limits.

Analyzed by: Datachem

Reviewed by: 

Michael J. Wantland, TSgt, USAF  
NCOIC Occupational Chemistry Branch

AIR FORCE  
OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AFB, TEXAS, 78235-5501

REPORT OF ANALYSIS

BASE SAMPLE NO: GT901357                      OEHL SAMPLE NO: 90068822  
SAMPLE TYPE:        WASTE, HAZARDOUS/TOXIC/DISPOSAL  
SITE IDENTIFIER: FABA104A                      DATE RECEIVED: 901109  
DATE COLLECTED: 901107                      DATE REPORTED: 910204  
SAMPLE SUBMITTED BY: 2nd Strategic Hosp./SGPR

RESULTS

<u>Test</u>	<u>Results</u>	<u>Units</u>	<u>EPA Method</u>
Arsenic	<0.3	mg/L	3020/7060
Barium	<0.5	mg/L	3010/7080
Benzene	<8.0	mg/L	
Cadmium	9.2	mg/L	3010/7130
Carbon Tetrachloride	<7.5	mg/L	
Chlordane	<0.0003	mg/L	
Chlorobenzene	<6.5	mg/L	
Chloroform	<9.0	mg/L	
Chromium	0.99	mg/L	3010/7190
m-Cresol	<.0050	mg/L	
o-Cresol	<.0050	mg/L	
p-Cresol	<.0050	mg/L	
1,4-Dichlorobenzene	<0.0044	mg/L	
1,2-Dichloroethane	<12	mg/L	
1,1-Dichloroethene	<6.0	mg/L	
2,4-D	.0004	mg/L	
2,4-Dinitrotoluene	<.0057	mg/L	
Endrin	<0.00001	mg/L	
Heptachlor	<0.00001	mg/L	
Hexachlorobenzene	<0.0019	mg/L	
Hexachlorobutadiene	<0.0009	mg/L	
Hexachloroethane	<0.0016	mg/L	
Lead	<0.3	mg/L	3010/7420
Lindane	<0.00001	mg/L	
Mercury	<0.0005	mg/L	7470
Methoxychlor	<0.0006	mg/L	
Methyl Ethyl Ketone	<19	mg/L	
Nitrobenzene	<0.0019	mg/L	

TO:

AFOEHL/EQ  
BROOKS AFB TX 78235-5501

PAGE 1 (Cont'd)

AIR FORCE  
OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AFB, TEXAS, 78235-5501

REPORT OF ANALYSIS

BASE SAMPLE NO: GT901357                      OEHL SAMPLE NO: 90068822  
SAMPLE TYPE:        WASTE, HAZARDOUS/TOXIC/DISPOSAL  
SITE IDENTIFIER: FARA104A                      DATE RECEIVED: 901109  
DATE COLLECTED: 901107                      DATE REPORTED: 910204  
SAMPLE SUBMITTED BY: 2nd Strategic Hosp./SGPB

RESULTS

<u>Test</u>	<u>Results</u>	<u>Units</u>	<u>EPA Method</u>
Pentachlorophenol	<.0036	mg/L	
Pyridine	<.0050	mg/L	
Selenium	<0.3	mg/L	3020/7740
Silver	<0.05	mg/L	3010/7760
Toxaphene	<0.001	mg/L	
Vinyl Chloride	<8.5	mg/L	
Trichloroethylene	<6.5	mg/L	
Tetrachloroethylene	<7.5	mg/L	
2,4,5-Trichlorophenol	<.0050	mg/L	
2,4,6-Trichlorophenol	<.0027	mg/L	
Silvex	<0.00005	mg/L	
Flash Point (closed cup)	>140	degrees F	1010
Corrosivity	SINC		1110
Hydrogen ion (pH)	9.2		1110
Cyanide (total)	<0.2		SW 846 SEC 8.3
Sulfides	10	mg/L	SW 846 SFC 8.3
Major components	SN		

SN        : See comment.

SINC      : Sample is not corrosive.

AIR FORCE  
OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AFB, TEXAS, 78235-5501

REPORT OF ANALYSIS

BASE SAMPLE NO: GT901357                      OEHL SAMPLE NO: 90068822  
SAMPLE TYPE:        WASTE, HAZARDOUS/TOXIC/DISPOSAL  
SITE IDENTIFIER: FARA104A                      DATE RECEIVED: 901109  
DATE COLLECTED: 901107                      DATE REPORTED: 910204  
SAMPLE SUBMITTED BY: 2nd Strategic Hosp./SGPR

---

RESULTS

---

<u>Test</u>	<u>Results</u>	<u>Units</u>	<u>EPA Method</u>
-------------	----------------	--------------	-------------------

Comments:

PER MSGT. VAUGHN AND CONCURRENCE BY LT. MCLARIN (EHE) CHANGE TCLP  
METAL TO FULL TCLP.

SAMPLE IS (TOP 95%) 100% WATER. (BOTTOM 5%) 100% SOLID, WHITE  
SOLIDS, LOOKS LIKE A ROCK.

< - Signifies none detected and the detection limits.

Analyzed by: Datachem

Reviewed by:



Michael J. Wantland, TCgt, USAF  
NCOIC Occupational Chemistry Branch

AIR FORCE  
OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AFB, TEXAS, 78235-5501

REPORT OF ANALYSIS

BASE SAMPLE NO: GT901352      DEHL SAMPLE NO: 93068832  
SAMPLE TYPE: WASTE, HAZARDOUS/TOXIC/DISPOSAL  
SITE IDENTIFIER:      DATE RECEIVED: 901109  
DATE COLLECTED: 901107      DATE REPORTED: 910103  
DATE REPRINTED: 910103  
SAMPLE SUBMITTED BY: 2nd Strategic Hosp./SGPR

---

RESULTS

---

<u>Test</u>	<u>Results</u>	<u>Units</u>	<u>Max Level</u>
Total organic halides	<1.0	mg/l	4000 ppm

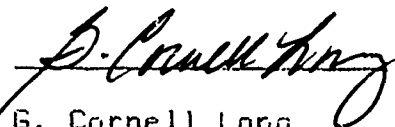
Comments:

< - Signifies none detected and the detection limits.

FROM 2FMS/MAFC, BATTERY SHOP Bldg 5743

Analyzed by: Biospherics, Inc.

Reviewed by:



G. Cornell Long  
Chemist, Trace Organics

TO:

AFDEHL/ER  
BROOKS AFB TX 78235-5501

PAGE 1

AIR FORCE  
OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AFB, TEXAS, 78235-5501

REPORT OF ANALYSIS

BASE SAMPLE NO: GT901359                      DEHL SAMPLE NO: 90068823  
SAMPLE TYPE:            WASTE, HAZARDOUS/TOXIC/DISPOSAL  
SITE IDENTIFIER:                                      DATE RECEIVED: 901109  
DATE COLLECTED: 901108                              DATE REPORTED: 910204  
SAMPLE SUBMITTED BY: 2nd Strategic Hosp./SGPR

RESULTS

<u>Test</u>	<u>Results</u>	<u>Units</u>	<u>EPA Method</u>
1,1-Dichloroethene	<6.0	mg/L	
Lindane	NP	mg/L	
Toxaphene	NP	mg/L	
Arsenic	0.3	mg/L	3020/7060
Barium	2.6	mg/L	3010/7080
Benzene	<8.0	ug/L	
Cadmium	16.	mg/L	3010/7130
Carbon Tetrachloride	<7.5	mg/L	
Chlordane	NP	mg/L	
Chlorobenzene	<6.5	mg/L	
Chloroform	<9.0	mg/L	
Chromium	6.5	mg/L	3010/7190
m-Cresol	<.0050	mg/L	
o-Cresol	350.	mg/L	
p-Cresol	82.	mg/L	
1,4-Dichlorobenzene	<0.0044	mg/L	
1,2-Dichloroethane	<12	mg/L	
2,4-D	<0.0001	mg/L	
2,4-Dinitrotoluene	<.0057	mg/L	
Endrin	NP	mg/L	
Heptachlor	NP	mg/L	
Hexachlorobenzene	<0.0019	mg/L	
Hexachlorobutadiene	<0.0009	mg/L	
Hexachloroethane	<0.0016	mg/L	
Lead	66.	mg/L	3010/7420
Mercury	<0.0005	mg/L	7470
Methoxychlor	NP	mg/L	
Methyl Ethyl Ketone	<19	mg/L	

TD:

AFOEHL/EQ  
BROOKS AFB TX 78235-5501

PAGE 1 (Cont'd)



AIR FORCE  
OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AFB, TEXAS, 78235-5501

REPORT OF ANALYSIS

BASE SAMPLE NO: GT901359                      OFHL SAMPLE NO: 90068823  
SAMPLE TYPE:        WASTE, HAZARDOUS/TOXIC/DISPOSAL  
SITE IDENTIFIER:                      DATE RECEIVED: 901109  
DATE COLLECTED: 901108                      DATE REPORTED: 910204  
SAMPLE SUBMITTED BY: 2nd Strategic Hosp./SGPB

RESULTS

<u>Test</u>	<u>Results</u>	<u>Units</u>	<u>EPA Method</u>
Nitrobenzene	<0.0019	mg/L	
Pentachlorophenol	<.0036	mg/L	
Pyridine	<.0050	mg/L	
Selenium	<0.3	mg/L	3020/7740
Silver	0.35	mg/L	3010/7740
Vinyl Chloride	<8.5	mg/L	
Trichloroethylene	<6.5	mg/L	
Tetrachloroethylene	<7.5	mg/L	
2,4,5-Trichlorophenol	<.0050	mg/L	
2,4,6-Trichlorophenol	<.0027	mg/L	
Silvex	<0.00005	mg/L	
Flash Point (closed cup)	>140	degrees F	1010
Corrosivity	SINC		1110
Hydrogen ion (pH)	6.3		1110
Cyanide (total)	<0.2		SM 846 SEC 8.3
Sulfides	<10.0	mg/L	SM 846 SEC 8.3
Major components	SN		

NP        : Test Not Performed  
SN        : See comment.  
SINC      : Sample is not corrosive.

AIR FORCE  
OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AFB, TEXAS, 78235-5501

REPORT OF ANALYSIS

BASE SAMPLE NO: GT901359                      DEHL SAMPLE NO: 90068823  
SAMPLE TYPE:        WASTE, HAZARDOUS/TOXIC/DISPOSAL  
SITE IDENTIFIER:                                      DATE RECEIVED: 901109  
DATE COLLECTED: 901108                              DATE REPORTED: 910204  
SAMPLE SUBMITTED BY: 2nd Strategic Hosp./SGPR

---

RESULTS

---

<u>Test</u>	<u>Results</u>	<u>Units</u>	<u>EPA Method</u>
-------------	----------------	--------------	-------------------

Comments:

PER MSGT. VAUGHN AND CONCURRENCE BY LT. MCLARIN (EQE) CHANGE TCLP METAL TO FULL TCLP.

SAMPLE IS (TOP 78%) 81% WATER, 8% TRIETHANOL AMINE, 3% 2-METHYL 2,4-PENTANEDIOL, 2% 1-NOR-BUTOXY 2-PROPANOL, 1% MYRISTIC ACID, 1% OLEIC ACID AND 1% UNIDENTIFIED OXYGEN CONTAINING COMPOUND. (MIDDLE 13%) 84% WATER, 4% ISOPROPANOL ALCOHOL, 3% ACETONE, 3% METHYL ETHYL KETONE, 3% PROPYLENE GLYCOL MONOMETHYL ETHER ACETATE, 2% C4 ALCOHOLS AND 1% PROPYLENE GLYCOL MONOMETHYL ETHER. (BOTTOM 9%) 100% SLUDGE.

< - Signifies none detected and the detection limits.

Analyzed by: Datachem

Reviewed by: 

Michael J. Wantland, TSgt, USAF  
NCOIC Occupational Chemistry Branch

AIR FORCE  
OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AFB, TEXAS, 78235-5501

REPORT OF ANALYSIS

BASE SAMPLE NO: GT901361                      DFHL SAMPLE NO: 90068824  
SAMPLE TYPE:        WASTE, HAZARDOUS/TOXIC/DISPOSAL  
SITE IDENTIFIER:                                      DATE RECEIVED: 901109  
DATE COLLECTED: 901108                              DATE REPORTED: 910204  
SAMPLE SUBMITTED BY: 2nd Strategic Hosp./SGPB

---

RESULTS

---

<u>Test</u>	<u>Results</u>	<u>Units</u>	<u>EPA Method</u>
1,2-Dichloroethane	<12	mg/L	
Arsenic	<0.3	mg/L	3020/7060
Barium	<0.5	mg/L	3010/7080
Benzene	<8.0	mg/L	
Cadmium	0.12	mg/L	3010/7130
Carbon Tetrachloride	<7.5	mg/L	
Chlordane	<0.0003	mg/L	
Chlorobenzene	<6.5	mg/L	
Chloroform	<9.0	mg/L	
Chromium	0.41	mg/L	3010/7190
m-Cresol	<.0050	mg/L	
o-Cresol	<.0050	mg/L	
p-Cresol	<.0050	mg/L	
1,4-Dichlorobenzene	<0.0044	mg/L	
1,1-Dichloroethene	<6.0	mg/L	
2,4-D	<0.0001	mg/L	
2,4-Dinitrotoluene	<.0057	mg/L	
Endrin	<0.00001	mg/L	
Heptachlor	<0.00001	mg/L	
Hexachlorobenzene	<0.0019	mg/L	
Hexachlorobutadiene	<0.0009	mg/L	
Hexachloroethane	<0.0016	mg/L	
Lead	<0.3	mg/L	3010/7420
Lindane	<0.00001	mg/L	
Mercury	<0.0005	mg/L	7470
Methoxychlor	<0.0006	mg/L	
Nitrobenzene	<0.0019	mg/L	
Pentachlorophenol	<.0036	mg/L	

TD:

AFO:EHL/EQ  
BROOKS AFB TX 78235-5501

PAGE 1 (Cont'd)

AIR FORCE  
OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AFB, TEXAS, 78235-5501

REPORT OF ANALYSIS

BASE SAMPLE NO: GT901361      DFHL SAMPLE NO: 90068824  
SAMPLE TYPE:      WASTE, HAZARDOUS/TOXIC/DISPOSAL  
SITE IDENTIFIER:      DATE RECEIVED: 901109  
DATE COLLECTED: 901108      DATE REPORTED: 910204  
SAMPLE SUBMITTED BY: 2nd Strategic Hosp./SGPR

RESULTS

<u>Test</u>	<u>Results</u>	<u>Units</u>	<u>EPA Method</u>
Pyridine	<.0050	mg/L	
Selenium	<0.3	mg/L	3020/2740
Silver	<0.05	mg/L	3010/2760
Toxaphene	<0.001	mg/L	
Vinyl Chloride	<8.5	mg/L	
Trichloroethylene	<6.5	mg/L	
Tetrachloroethylene	<7.5	mg/L	
2,4,5-Trichlorophenol	<.0050	mg/L	
2,4,6-Trichlorophenol	<.0027	mg/L	
Silvex	<0.00005	mg/L	
Flash Point (closed cup)	<82.4	degrees F	1010
Corrosivity	SINC		1110
Hydrogen ion (pH)	7.3		1110
Cyanide (total)	<0.2		SW 846 SFC 8.3
Sulfides	<10.0	mg/L	SW 846 SFC 8.3
Methyl Ethyl Ketone	730.	mg/L	
Major components	SN		

SN : See comment.

SINC : Sample is not corrosive.

AIR FORCE  
OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AFB, TEXAS, 78235-5501

REPORT OF ANALYSIS

BASE SAMPLE NO: GT901361 DEHL SAMPLE NO: 90068824  
SAMPLE TYPE: WASTE, HAZARDOUS/TOXIC/DISPOSAL  
SITE IDENTIFIER: DATE RECEIVED: 901109  
DATE COLLECTED: 901108 DATE REPORTED: 910204  
SAMPLE SUBMITTED BY: 2nd Strategic Hosp./SGPB

RESULTS

<u>Test</u>	<u>Results</u>	<u>Units</u>	<u>EPA Method</u>
-------------	----------------	--------------	-------------------

Comments:

PER MSGT. VAUGHN AND CONCURRENCE BY LT. MOLARIN (EHE) CHANGE TCLP  
METAL TO FULL TCLP.  
SAMPLE IS (TOP 95%) 86% CR-C14 HYDROCARBONS (ALKANES AND AROMATICS)  
AND 14% TOLUENE. (MIDDLE 3%) 93% WATER, 2% DIETHYLENE GLYCOL  
MONOBUTYL ETHER, 1% METHANOL, 1% ACETONE, 1% ISOPROPANOL, 1% BUTANOL  
AND 1% UNIDENTIFIED OXYGEN CONTAINING COMPOUND. (BOTTOM 2%) 100%  
SLUDGE.

< - Signifies none detected and the detection limits.

Analyzed by: ~~Datachem~~

Reviewed by: 

Michael J. Wantland, TSgt, USAF  
NCOIC Occupational Chemistry Branch

AIR FORCE  
OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AFB, TEXAS, 78235-5501

REPORT OF ANALYSIS

BASE SAMPLE NO: GT901362      OEHL SAMPLE NO: 90069097  
SAMPLE TYPE:      WASTE. HAZARDOUS/TOXIC/DISPOSAL  
SITE IDENTIFIER: XXXXXXXXX      DATE RECEIVED: 901113  
DATE COLLECTED: 901108      DATE REPORTED: 910206  
SAMPLE SUBMITTED BY: 2nd Strategic Hosp./SGPB

RESULTS

<u>Test</u>	<u>Results</u>	<u>Units</u>	<u>EPA Method</u>
Aroclor 1016	<0.4	ug/L	EPA608
Aroclor 1221	<0.4	ug/L	EPA608
Aroclor 1232	<0.4	ug/L	EPA608
Aroclor 1242	<0.4	ug/L	EPA608
Aroclor 1248	<0.4	ug/L	EPA608
Aroclor 1254	<0.4	ug/L	EPA608
Aroclor 1260	<0.4	ug/L	EPA608

Analytical method used: EPA Method 608


Comments:

SGT ROBERT DAVIS/BARKSDALE AFB

< - Signifies none detected and the detection limits.

Analyzed by: Datachem

Reviewed by:



Michael J. Wantland, TSgt, USAF  
NCOIC Occupational Chemistry Branch

TO:

AFOEHL/EO  
BROOKS AFB TX 78235-5501

AIR FORCE  
OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AFB, TEXAS, 78235-5501

REPORT OF ANALYSIS

BASE SAMPLE NO: GT901363      OEHL SAMPLE NO: 90069095  
SAMPLE TYPE:      WASTE. HAZARDOUS/TOXIC/DISPOSAL  
SITE IDENTIFIER: XXXXXXXX      DATE RECEIVED: 901113  
DATE COLLECTED: 901108      DATE REPORTED: 910206  
SAMPLE SUBMITTED BY: 2nd Strategic Hosp./SGFB

RESULTS

<u>Test</u>	<u>Results</u>	<u>Units</u>	<u>EPA Method</u>
Aroclor 1016	<0.4	ug/L	EPA608
Aroclor 1221	<0.4	ug/L	EPA608
Aroclor 1232	<0.4	ug/L	EPA608
Aroclor 1242	<0.4	ug/L	EPA608
Aroclor 1248	<0.4	ug/L	EPA608
Aroclor 1254	<0.4	ug/L	EPA608
Aroclor 1260	<0.4	ug/L	EPA608

Analytical method used: EPA Method 608

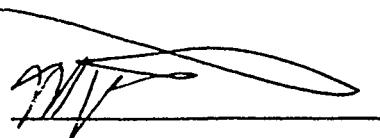
Comments:

SGT ROBERT DAVIS/BARKSDALE AFB

< - Signifies none detected and the detection limits.

Analyzed by: Detachem

Reviewed by:



Michael J. Wantland, TSgt, USAF  
NCOIC Occupational Chemistry Branch

TO:


AFOEHL/EQ  
BROOKS AFB TX 78235-5501

AIR FORCE  
OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AFB, TEXAS, 78235-5501

REPORT OF ANALYSIS

BASE SAMPLE NO: GT901364      GEHL SAMPLE NO: 90069094  
SAMPLE TYPE: WASTE, HAZARDOUS/TOXIC/DISPOSAL  
SITE IDENTIFIER: XXXXXXXXX      DATE RECEIVED: 901113  
DATE COLLECTED: 901108      DATE REPORTED: 910206  
SAMPLE SUBMITTED BY: 2nd Strategic Hosp..SGPB

RESULTS


<u>Test</u>	<u>Results</u>	<u>Units</u>	<u>EPA Method</u>
Total organic halides	<0.1		

Comments:

SGT. ROBERT DAVIS/BARKSDALE AFB  
< - Signifies none detected and the detection limits.

Analyzed by: Datachem

Reviewed by:



Michael J. Wantland, TSgt, USAF  
NCOIC Occupational Chemistry Branch

TO:

AFOEHL/EQ  
BROOKS AFB TX 78235-5501

PAGE 1



## REPORT OF ANALYSIS

## RESULTS.

86

AIR FORCE  
OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AFB, TEXAS, 78235-5501

REPORT OF ANALYSIS

BASE SAMPLE NO: GT901364 OEHL SAMPLE NO: 90069099  
SAMPLE TYPE: WASTE, HAZARDOUS/TOXIC/DISPOSAL  
SITE IDENTIFIER: XXXXXXXXX DATE RECEIVED: 901113  
DATE COLLECTED: 901108 DATE REPORTED: 910206  
SAMPLE SUBMITTED BY: 2nd Strategic Hosp./SGPB

RESULTS

<u>Test</u>	<u>Results</u>	<u>Units</u>	<u>EPA Method</u>
Aroclor 1016	<0.4	ug/L	EPA608
Aroclor 1221	<0.4	ug/L	EPA608
Aroclor 1232	<0.4	ug/L	EPA608
Aroclor 1242	<0.4	ug/L	EPA608
Aroclor 1248	<0.4	ug/L	EPA608
Aroclor 1254	<0.4	ug/L	EPA608
Aroclor 1260	<0.4	ug/L	EPA608

Analytical method used: EPA Method 608

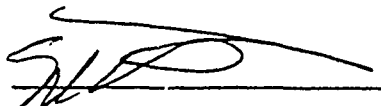
Comments:

SGT ROBERT DAVIS/BARKSDALE AFB

< - Signifies none detected and the detection limits.

Analyzed by: Datachem

Reviewed by:



Michael J. Wantland, TSgt, USAF  
NCOIC Occupational Chemistry Branch

TO:

AFOEHL/EO  
BROOKS AFB TX 78235-5501

AIR FORCE  
OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AFB, TEXAS. 78235-5501

REPORT OF ANALYSIS

BASE SAMPLE NO: GT901365      OEHL SAMPLE NO: 90069100  
SAMPLE TYPE: WASTE, HAZARDOUS/TOXIC/DISPOSAL  
SITE IDENTIFIER: XXXXXXXX      DATE RECEIVED: 901113  
DATE COLLECTED: 901108      DATE REPORTED: 910206  
SAMPLE SUBMITTED BY: 2nd Strategic Hosp./SGPB

RESULTS

<u>Test</u>	<u>Results</u>	<u>Units</u>	<u>EPA Method</u>
Aroclor 1016	<0.4	ug/L	EPA608
Aroclor 1221	<0.4	ug/L	EPA608
Aroclor 1232	<0.4	ug/L	EPA608
Aroclor 1242	<0.4	ug/L	EPA608
Aroclor 1248	<0.4	ug/L	EPA608
Aroclor 1254	<0.4	ug/L	EPA608
Aroclor 1260	<0.4	ug/L	EPA608

Analytical method used: EPA Method 608

Comments:

SGT ROBERT DAVIS/BARKSDALE AFB

< - Signifies none detected and the detection limits.

Analyzed by: Datachem

Reviewed by: 

Michael J. Wantland, TSgt, USAF  
NCOIC Occupational Chemistry Branch

TO:

AFOEHL/EO  
BROOKS AFB TX 78235-5501

PAGE 1

AIR FORCE  
OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY  
BROOKS AFB, TEXAS, 78235-5501

REPORT OF ANALYSIS

BASE SAMPLE NO: GT901366      OEHL SAMPLE NO: 90069101  
SAMPLE TYPE: WASTE, HAZARDOUS/TOXIC/DISPOSAL  
SITE IDENTIFIER: XXXXXXXXX      DATE RECEIVED: 901113  
DATE COLLECTED: 901108      DATE REPORTED: 910206  
SAMPLE SUBMITTED BY: 2nd Strategic Hosp./SGPS

RESULTS

<u>Test</u>	<u>Results</u>	<u>Units</u>	<u>EPA Method</u>
Aroclor 1016	<0.4	ug/L	EPA608
Aroclor 1221	<0.4	ug/L	EPA608
Aroclor 1232	<0.4	ug/L	EPA608
Aroclor 1242	<0.4	ug/L	EPA608
Aroclor 1246	<0.4	ug/L	EPA608
Aroclor 1254	<0.4	ug/L	EPA608
Aroclor 1260	<0.4	ug/L	EPA608

Analytical method used: EPA Method 608


Comments:

SGT ROBERT DAVIS/BARKSDALE AFB

< - Signifies none detected and the detection limits.

Analyzed by: Datachem

Reviewed by:

  
Michael J. Wantland, TSgt, USAF  
NCOIC Occupational Chemistry Branch

TO:

AFOEHL/EO  
BROOKS AFB TX 78235-5501

# Distribution List

	Copies
HQ AFSC/SGPB Andrews AFB DC 20334-5000	1
HQ USAF/SGPA Bolling AFB DC 20332-6188	1
HQ SAC/DEEV Offutt AFB NE 68113-5001	5
HQ SAC/SGPB Offutt AFB NE 68113-5001	1
AAMRL/TH Wright-Patterson AFB OH 45433-6573	1
7100 CSW Med Cen/SGPB APO New York 09220-5300	1
Det 3 AL APO San Francisco 96239-5000	1
USAFSAM/TSK Brooks AFB TX 78235-5301	1
USAFSAM/BE Brooks AFB TX 78235-5301	2
Defense Technical Information Center (DTIC) Cameron Station Alexandria VA 22304-6145	2
HQ USAF/LEEV Bolling AFB DC 20330-5000	1
HQ AFESC/RDV Tyndall AFB FL 32403-6001	1
2 Strategic Hospital/SGPB Barksdale LA 71110-5300	5
2 CSG/DEV Barksdale LA 71110-5000	5
HSD/XA Brooks AFB TX 78235-5000	1